

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

**THIS PAGE BLANK (USPTO)**

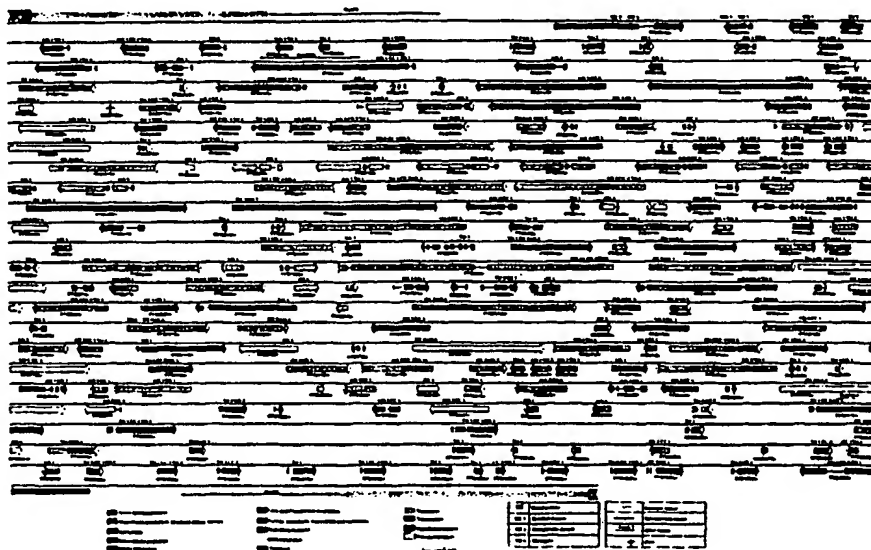




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>7</sup> : <b>A61K</b>	<b>A2</b>	(11) International Publication Number: <b>WO 00/25728</b> (43) International Publication Date: 11 May 2000 (11.05.00)
<p>(21) International Application Number: PCT/US99/26796</p> <p>(22) International Filing Date: 5 November 1999 (05.11.99)</p> <p>(30) Priority Data: 60/107,131 5 November 1998 (05.11.98) US</p> <p>(71)(72) Applicants and Inventors: HOFFMAN, Stephen [US/US]; Naval Medical Research Center Annex, 12300 Washington Avenue, Rockville, MD 20852 (US). CARUCCI, Daniel [US/US]; Naval Medical Research Center Annex, 12300 Washington Avenue, Rockville, MD 20852 (US). GARDNER, Malcolm [US/US]; The Institute for Genomic Research, 9712 Medical Center Drive, Rockville, MD 20850 (US). VENTER, J., Craig [US/US]; The Institute for Genomic Research, 9712 Medical Center Drive, Rockville, MD 20850 (US).</p> <p>(74) Agent: MCDONNEL, Thomas, E.; Office of Naval Research, 800 North Quincy Street, Arlington, VA 22217-5660 (US).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> Without international search report and to be republished upon receipt of that report.</p>

(54) Title: CHROMOSOME 2 SEQUENCE OF THE HUMAN MALARIA PARASITE *PLASMODIUM FALCIPARUM* AND PROTEINS OF SAID CHROMOSOME USEFUL IN ANTI-MALARIAL VACCINES AND DIAGNOSTIC REAGENTS



Gene map of *P. falciparum* chromosome 2. Predicted coding regions are shown on each strand. Exons of protein-coding genes are indicated by rectangles, and lines linking rectangles represent introns. The single 18S rRNA gene is indicated by a dashed rectangle. Genes are color-coded according to broad role categories as shown in the key.

Gene identification numbers correspond to Pf numbers in Table 2. The letters CC, MC, and TM followed by numbers indicate the number of predicted coiled-coil, membrane, and transmembrane domains in the proteins, respectively.

## (57) Abstract

Chromosome 2 of *Plasmodium falciparum* was sequenced and shown to contain 945,000 base pairs and encode 209 predicted genes. Compared to the *Saccharomyces cerevisiae* genome, chromosome 2 has a lower gene density, introns are more frequent, and proteins are markedly enriched in non-globular domains. A new family of surface proteins, rifins, was identified. Rifins are believed to play a role in antigenic variation. The genome sequence provides a foundation for development of methods to control malaria, a disease that kills millions of people annually.

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

Chromosome 2 Sequence of the Human Malaria Parasite *Plasmodium falciparum* and Proteins of said  
Chromosome Useful in Anti-Malarial Vaccines and Diagnostic Reagents

Field of the Invention

This invention relates to proteins of gene models contained within chromosome 2 (the second largest of 14 identified chromosomes) from the human malaria parasite, *Plasmodium falciparum* (clone 3D7) and related families of gene products from other clones or strains of *Plasmodium falciparum*. These proteins facilitate anti-malarial vaccine development, drug discovery and the development of new diagnostic reagents.

Background of the Invention

Malaria, a disease caused by protozoan parasites of the genus *Plasmodium*, is one of the most important infectious diseases affecting human populations. Approximately 300-500 million people are infected annually, and 1.5-2.7 million lives are lost to malaria each year, with most deaths occurring among children in sub-Saharan Africa (1). Of the 4 species that cause malaria in humans, *P. falciparum* is responsible for the most morbidity and mortality. Parasite resistance to drugs and mosquito resistance to insecticides have led to a resurgence of malaria in many parts of the world, and a pressing need for vaccines and new drugs. Identification of new targets for vaccine and drug development is dependent upon expansion of our understanding of parasite biology, a process hampered by the complexity of the parasite life cycle. Sequencing of the *Plasmodium* genome promises to circumvent many of these difficulties and rapidly increase our knowledge about these parasites.

The *P. falciparum* genome is approximately 30 Mb in size, has a base composition of 82% AT, and contains 14 chromosomes ranging from 0.65 to 3.4 Mb. Chromosomes from different wild isolates exhibit extensive size polymorphism. Mapping studies indicate that the chromosomes contain central domains that are conserved between isolates and polymorphic subtelomeric domains containing repeated sequences. *P. falciparum* also contains two organellar genomes. The mitochondrial genome is a 5.9 kb tandemly-repeated DNA, and a 35 kb circular DNA that encodes genes usually associated with plastid genomes is located within the apicoplast, an organelle of uncertain function in *Plasmodium* and the related parasite *Toxoplasma* (2).

Genomic information is being generated from entire organisms at a rapid pace. Currently there are dozens of microbial organisms for which the entire genetic sequence has been decoded. For the majority of those, simple methods can be used to identify the regions of the DNA that are responsible for the production of proteins. However, in many organisms, for which most have not had complete genome sequencing, the regions of the genome that are identified to make up the final gene structure are not easily defined. In these cases, the resulting gene sequence that encodes a protein is actually made from fragments of the genome sequence. The regions that constitute a protein-encoding gene are known as "exons" and the regions within that are excised from the final gene are known as "introns". It is the identification of the series of exons and their exact relationship to one another that allows one to identify the

amino acid sequence for the encoded protein. Individuals may identify correct gene sequences experimentally and have traditionally done this by looking at complementary DNA (cDNA) derived from RNA isolated from an organism or stage of an organism. However, due to technical reasons, it is rare that full-length sequences of cDNA are obtained by this method. Gene model and the proteins they encode constitute a novel means of identifying proteins from the genome of a microorganism.

#### SUMMARY OF THE INVENTION

Accordingly, an object of this invention is the use of the identified proteins, through the predicted gene models derived from the genetic sequence of *Plasmodium falciparum* chromosome 2, to identify potential novel targets for anti-Plasmodial and antimalarial drugs vaccines and diagnostics.

Another object of this invention is the identification of novel biochemical pathways that regulate cellular biochemistry, including but not limited to drug resistance. These protein models can then be used to develop diagnostics for the early identification of drug resistant *Plasmodium* species.

Another objective of this invention is the identification through protein homologies of potential drug, vaccine and diagnostic targets from related species of *Plasmodium*.

These and additional objects of the invention are accomplished by identification of protein encoding genes and gene models derived from the sequencing of chromosome 2 from *Plasmodium falciparum*. Specifically, gene models for proteins encoded by DNA sequence from chromosome 2 are identified using computer algorithms that predict gene boundaries both from without and within genes. This invention identifies whole genes and the portions of the DNA that constitute protein-encoding genes.

#### BRIEF DESCRIPTION OF THE DRAWINGS

A more complete appreciation of the invention will be readily obtained by reference to the following Description of the Preferred Embodiments and the accompanying drawings in which like numerals in different figures represent the same structures or elements. The representation in each of the figures is diagrammatic and no attempt is made to indicate actual scales or precise ratios. Proportional relationships are shown as approximations.

Fig. 1 is a gene map of the *P.falciparum* chromosome 2.

Fig. 2 is DNA sequence of multiple alignment of the predicted 5'-3' exonuclease (PFB0180w) encoded in chromosome 2 with homologous bacterial exonuclease domains showing the large non-globular insert in *Plasmodium*.

Fig. 3 is multiple sequence alignment of rifins encoded on chromosome 2. The predicted coding regions were aligned with CLUSTALW (32) using the default settings.

#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

The identification of all of the predicted proteins from chromosome 2 is accomplished using novel strategies and computational software as described in co-pending Provisional Application Navy Case No. 79,176 filed 24 April 1998. These protein sequences represent targets for undeveloped drugs, vaccines and diagnostics and will lead to the identification of new biochemical pathways and mechanisms of resistance to drugs.

The alternatives to identifying these particular proteins includes a gene-by-gene approach either by amplification of DNA sequences by means such as degenerate polymerase chain reaction, or by hybridization of genomic or expression libraries. Neither of these alternatives is desirable, as none will ensure the full length of the predicted protein. An advantage to the identification of expression libraries is that the biological determined intron-exon boundaries can be determined accurately. However, expression libraries can only be developed from particular

stages of an organism's life cycle and in the case of *Plasmodium* parasites that means, in a practical sense only from blood stage parasites. Therefore by this method it is certain that many protein sequences will be left unidentified.

Chromosome 2 was sequenced using the shotgun sequencing approach used previously to sequence several microbial genomes (3), with modifications to compensate for the AT-richness of *P.falciparum* DNA (4). The most important modifications were extraction of DNA from agarose under high-salt conditions to prevent melting of the DNA at high temperature, avoidance of UV light, use of the "v+i" protocol for library construction, sequencing with dye-terminator chemistry, use of a reduced extension temperature in PCR reactions, and use of a transposon-insertion method for closure of very AT-rich gaps. The assembly software was also modified to minimize miss-assembly of AT-rich sequences. The sequence included portions of both telomeres, had an average redundancy of 10.7-fold, and co-linearity of the final sequence and genomic DNA was proven by use of optical restriction and YAC maps.

Chromosome 2 of *P.falciparum* (clone 3D7) is 945 kb in length and has an overall base composition of 80.2% A+T. The chromosome contains a large central region encoding single-copy and several duplicated genes, subtelomeric regions containing variant antigen genes (var) (5), RIF-1 elements (repetitive interspersed family) (6) and other repeats, and typical eukaryotic telomeres (Fig. 1). Figure 1. Gene map of *P.falciparum* chromosome 2. Predicted coding regions are shown on each strand. Exons of protein encoding genes are indicated by rectangles with lines linking rectangles representing introns. The single tRNA<sup>Glu</sup> gene is indicated by a cloverleaf structure. Genes are color-coded according to broad role categories as shown in the key. Gene identification numbers correspond to those in Table 2. The letters CC, NG and TM followed by numerals indicate the number of predicted coiled-coil, non-globular, and transmembrane domains in the proteins, respectively. The terminal 19 kb portions of the chromosome are non-coding and exhibit 77% identity in opposite orientations. The left and right telomeres consist of tandem repeats of the sequence TT(TC)AGGG (7) totaling 1141 and 551 nt, respectively. The subtelomeric regions do not exhibit repeat oligomers until approximately 12-20 kb into the chromosome, where rep20 (8), a 21 bp tandem direct repeat found exclusively in these regions, occurs 134 and 96 times in the left and right ends of the chromosome, respectively. The sequence similarity observed between the subtelomeric regions supports previous suggestions that recombination between chromosome ends may be one mechanism by which genetic diversity is generated. A region with centromere functions could not be identified based on sequence similarity to *S. cerevisiae* or other eukaryotic centromeres (9). However, several regions of up to 12 kb are devoid of large open reading frames and might contain the centromere. Alternatively, centromeric functions may be defined by higher-order DNA structures and chromatin-associated protein complexes (10).

Two hundred nine protein-encoding genes and a gene for tRNA<sup>Glu</sup> (Fig. 1, Table 1) were predicted (11) on chromosome 2, giving a gene density of one gene per 4.5 kb, a value between that observed in yeast (one gene per 2 kb) and *C. elegans* (one gene per 7 kb). Of the 209 protein-encoding genes, 43% contain at least one intron. This is an estimate because some introns may have been missed by the gene finding method. Most spliced genes consist of two or three exons. In terms of intron content and gene density, the *Plasmodium* genome, assessed by the analysis of the first completed chromosome sequence, appears to be intermediate between the condensed yeast genome and the intron-rich genomes of multicellular eukaryotes.

Table 1.

Summary of features of *P. falciparum* chromosome 2 and comparison to *S. cerevisiae* chromosome 3.

ND, not determined.

†Protein structural features were predicted as described (11).

Description	Number	
	P. f. chr 2	S. c. chr 3
Chromosome length (kb)	945	315
G + C content (%)	19.7	38.6
Exons	24.3	40.0
Introns	13.3	ND*
Kilobases per gene	4.50	1.73
Number of predicted protein coding regions	209	171
Number of genes with introns (%)	90 (43)	4 (2.2)
tRNA genes	1	10
Class of proteins†		
Total	209	171
Secreted (%)	22 (11)	11 (6)
Integral membrane (%)	90 (43)	42 (24)
Integral membrane with multiple predicted transmembrane domains (%)	27 (13)	21 (12)
Containing coiled-coil domains (%)	111 (53)	32 (19)
Containing other large compositionally biased regions with predicted non-globular structure (%)	155 (75)	71 (41)
Completely non-globular (%)	17 (8)	6 (3.5)
With detectable homologs in other species	87 (42)	145 (85)

The proteins encoded in chromosome 2 (Table 2) fall into 3 categories: i) 72 proteins (34%) are conserved in other genera and contain one or more distinct globular domains; ii) 47 proteins (23%) belong to *Plasmodium*-specific families with identifiable structural features and in some cases, known functions; iii) 90 predicted proteins (43%) have no detectable homologs, although many contain structural features such as signal peptides and transmembrane domains. Homologs outside *Plasmodium* were detected for 87 (42%) of the 209 predicted proteins. This includes proteins in the 1st category, plus those proteins in the 2nd category that possess conserved domain(s) arranged in a manner unique to *Plasmodium*. The percentage of evolutionarily conserved proteins is about two-fold lower than found for other genomes, mainly because most of the remaining proteins were predicted to consist primarily of non-globular domains (12) (Table 1). The abundance of non-globular domains in *Plasmodium* proteins is very unusual; the proportion of proteins with predicted large non-globular domains in other eukaryotes, such as *S. cerevisiae* (Table 1) or *C. elegans* (13) is approximately half that observed in *Plasmodium*. Furthermore, 13 of the 87 conserved proteins on chromosome

2 appear to contain large non-globular structures (>30 amino acids) inserted directly into globular domains, as determined by alignment with homologs from other species.

Table 2.

Identification of genes on *P.falciparum* chromosome 2.

PF#, systematic name assigned according to a method adapted from *S. cerevisiae* (11).

Description: Name, if known, and prominent features of the gene.

Abbreviations are as follows: euk, eukaryotic; nt, nucleotide; OO, organellar origin; TP, transit peptide.

PF#	Description	PF#	Description
<u>Amino acid biosynthesis</u>			
PFB0200c	aspartate aminotransferase		
<u>Biosynthesis of cofactors, prosthetic groups, and carriers</u>			
PFB0130w	prenyl transferase		
PFB0220w	ubiquinone biosynthesis methyltrans.		
<u>Fatty acid and phospholipid metabolism</u>			
PFB0385w	acyl-carrier protein		
PFB0410c	phospholipase A2-like a/b fold hydrolase		
PFB0505c	3-ketoacyl carr. protein synthase III, FabH (OO, TP)		
PFB0685c	ATP-dept. acyl-CoA synthetase (TP)		
PFB0695c	ATP-dept. acyl-CoA synthetase (TP)		
<u>Purines, pyrimidines, nucleosides, and nucleotides</u>			
PFB0295w	adenylosuccinate lyase (OO)		
<u>DNA metabolism</u>			
PFB0160w	ERCC1-like excision repair protein		
PFB0180w	protein with 5'-3' exonucl. domain (OO, TP)		
PFB0205c	protein with 5'-3' exonucl. domain (Kem-1 family)		
PFB0265c	RAD2 endonucl.		
PFB0440c	chromatinic RING finger protein, DRING ortholog		
PFB0720c	ori. recognition cmplx subunit 5 (ATPase)		
PFB0730w	BRAHMA ortholog (DNA helicase superfamily II)		
PFB0840w	replication factor C, 40 kDa subunit (replication activat.)		
PFB0875c	chromatin-binding protein (SKI/SNW family)		
PFB0895c	replication factor C, 140 kDa subunit (ATPase)		
<u>Energy metabolism</u>			
PFB0795w	ATP synthase alpha chain		
PFB0880w	FAD-dependent oxidoreductase (OO)		
<u>Transcription</u>			
PFB0140w	metal binding protein (DHHC domain)		
PFB0175c	protein of the MAK16 family		
PFB0215c	protein with Egl-like 3'-5' exonucl. domain		
PFB0245c	RNA polymerase 16kD subunit, RPB4-like		
PFB0255w	RRM type RNA binding protein		
PFB0290c	Zn-ribbon transcription factor (TFIIS family)		
PFB0370c	RNA-binding protein (KH domain)		
PFB0445c	eIF-4A-like DEAD family RNA helicase		
PFB0620w	YOU2-like small euk. C2C2 zinc finger protein		
PFB0715w	DNA-directed RNA polymerase subunit 2		
PFB0725c	metal binding protein (DHHC domain)		
PFB0855c	rRNA methylase (SpoU family) (OO, TP)		
PFB0860c	RNA helicase		
PFB0865w	small nuclear ribonucleoprotein. (SNRNP family)		
PFB0890c	pseudouridine synthet. (RsuA fam.); 1st euk. member (OO)		
<u>Translation and post-translational modification</u>			
PFB0165w	tRNA-Glu		
PFB0240w	PINT domain protein (proteasomal subunit)		

	PFB0260w	PSD2-like 26S proteasomal subunit
	PFB0325c	SERA antigen/ protease with active Cys
	PFB0330c	SERA antigen/ protease with active Cys
	PFB0335c	SERA antigen/ protease with active Cys
5	PFB0340c	SERA antigen/ protease with active Ser
	PFB0345c	SERA antigen/ protease with active Ser
	PFB0350c	SERA antigen/ protease with active Ser
	PFB0355c	SERA antigen/ protease with active Ser
10	PFB0360c	SERA antigen/ protease with active Ser
	PFB0380c	phosphatase (acid phosphatase family)
	PFB0390w	ribosome releasing factor (OO, TP)
	PFB0455w	ribosomal protein L37A
	PFB0515w	glycosyl transferase (novel euk. family)
	PFB0525w	asparaginyl-tRNA synthetase (OO, TP)
15	PFB0545c	ribosomal protein L7/L12 (OO)
	PFB0550w	euk. peptide chain release factor
	PFB0585w	Leu/Phe-tRNA protein transferase, 1st euk. member (OO)
	PFB0645c	ribosomal protein L13 (OO)
	PFB0830w	ribosomal protein S26
20	PFB0885w	ribosomal protein S30 Regulatory functions
	PFB0150c	Ser/Thr protein kinase
	PFB0510w	GAF domain protein (cyclic nt signal transduct.)
	PFB0520w	novel protein kinase
	PFB0605w	Ser/Thr protein kinase
25	PFB0665w	Ser/Thr protein kinase
	PFB0815w	calcium-dept. protein kinase (C-term. EF hand)

Transport

	PFB0210c	monosaccharide transporter
	PFB0275w	membrane transporter
30	PFB0435c	predicted amine transporter
	PFB0465c	membrane transporter

Cell surface

	PFB0010w	var gene
	PFB0015c	rifin
35	PFB0020c	var gene fragment
	PFB0025c	rifin
	PFB0030c	rifin
	PFB0035c	rifin
	PFB0040c	rifin
40	PFB0045c	var gene fragment
	PFB0050c	rifin pseudogene
	PFB0055c	rifin
	PFB0060w	rifin
	PFB0065w	rifin
45	PFB0100c	knob-associated His-rich protein
	PFB0300c	merozoite surface antigen MSP-2
	PFB0305c	merozoite surface antigen MSP-5 (EGF domain)
	PFB0310c	merozoite surface antigen MSP-4 (EGF domain)
	PFB0400w	PfS230 paralog (predicted secreted protein)
50	PFB0405w	transmission blocking target antigen PfS230
	PFB0570w	predicted secreted protein (thrombospondin domain)
	PFB0760w	Mtn3/RAG1IP-like protein
	PFB0915w	RESA-H3 antigen
	PFB0955w	rifin
55	PFB0975c	var gene fragment
	PFB1000w	rifin pseudogene



	PFB1005w	rifin
	PFB1010w	rifin
	PFB1015w	rifin
	PFB1020w	rifin
5	PFB1025w	var gene fragment
	PFB1030w	var gene fragment
	PFB1035w	rifin
	PFB1040w	rifin
	PFB1045w	var gene fragment
10	PFB1050w	rifin
	PFB1055c	var gene
	<u>Other cellular processes</u>	
	PFB0085c	protein with DnaJ domain (RESA-like)
	PFB0090c	protein with DnaJ domain
15	PFB0450w	protein translocation complex, sec61 gamma chain
	PFB0480w	syntxin
	PFB0500c	RAB GTPase
	PFB0595w	protein with DnaJ domain, DNJ1/SIS1 family
	PFB0635w	T-complex protein 1 (HSP60 fold superfamily)
20	PFB0640c	WEB-1 ortholog, WD40
	PFB0750w	VPS45-like protein (STXBP/UNC-18/SEC1 family)
	PFB0805c	clathrin coat assembly protein
	PFB0920w	protein with DnaJ domain (RESA-like)
	PFB0925w	protein with DnaJ domain (RESA-like)
25	<u>Unknown function</u>	
	PFB0270w	member family of bacterial proteins (OO)
	PFB0320c	member hesB fam. (poss. redox activity, OO,TP)
	PFB0420w	YgbB protein, 1st euk. member (OO, TP)
	PFB0425c	protein of the YMR7 family
30	PFB0110w	predicted integral membrane protein
	PFB0115w	predicted secreted protein
	PFB0120w	predicted integral membrane protein
	PFB0125c	predicted membrane associated protein
	PFB0135c	hypothetical protein
35	PFB0145c	hypothetical protein
	PFB0155c	hypothetical protein
	PFB0170w	hypothetical protein
	PFB0185w	hypothetical protein
	PFB0190c	predicted membrane associated protein
40	PFB0195c	hypothetical protein
	PFB0225c	hypothetical protein
	PFB0230c	hypothetical protein
	PFB0235w	hypothetical protein
	PFB0250w	hypothetical protein
45	PFB0280w	hypothetical protein
	PFB0285c	hypothetical protein
	PFB0315w	hypothetical protein
	PFB0365w	hypothetical protein
	PFB0375w	hypothetical protein
50	PFB0395w	predicted membrane associated protein
	PFB0400w	PfS230 paralog (predicted secreted protein)
	PFB0415c	predicted integral membrane protein
	PFB0430c	hypothetical protein
	PFB0460c	hypothetical protein
55	PFB0470w	hypothetical protein
	PFB0475c	predicted multiple-TM membrane protein

	PFB0485c	predicted multiple-TM membrane protein
	PFB0490c	hypothetical protein
	PFB0495w	hypothetical protein
	PFB0530c	hypothetical protein
5	PFB0535w	predicted multiple-TM membrane protein
	PFB0540w	hypothetical protein
	PFB0555c	hypothetical protein
	PFB0560w	hypothetical protein
	PFB0565w	predicted secreted protein
10	PFB0575c	hypothetical protein
	PFB0580w	hypothetical protein
	PFB0590w	hypothetical protein
	PFB0600c	hypothetical protein
	PFB0610c	hypothetical protein
15	PFB0615c	predicted membrane associated protein
	PFB0625w	hypothetical protein
	PFB0630c	hypothetical protein
	PFB0650w	hypothetical protein
	PFB0655c	hypothetical protein
20	PFB0660w	hypothetical protein
	PFB0670c	predicted coiled-coil domain protein
	PFB0675w	predicted secreted protein
	PFB0680w	hypothetical protein
	PFB0690w	hypothetical protein
25	PFB0700c	hypothetical protein
	PFB0705w	hypothetical protein
	PFB0710c	predicted integral membrane protein
	PFB0735c	predicted integral membrane protein
	PFB0740c	hypothetical protein
30	PFB0745w	hypothetical protein
	PFB0755w	hypothetical protein
	PFB0765w	hypothetical protein
	PFB0770c	predicted multiple-TM membrane protein
	PFB0775w	hypothetical protein
35	PFB0780c	predicted integral membrane protein
	PFB0785c	predicted integral membrane protein
	PFB0790c	predicted integral membrane protein
	PFB0800c	hypothetical protein
	PFB0810w	predicted membrane associated protein
40	PFB0820c	hypothetical protein
	PFB0825c	hypothetical protein
	PFB0835c	hypothetical protein
	PFB0845w	predicted integral membrane protein
	PFB0850c	hypothetical protein
45	PFB0870w	hypothetical protein
	PFB0900c	hypothetical protein
	PFB0905c	hypothetical protein
	PFB0910w	predicted integral membrane protein
	PFB0930w	predicted integral membrane protein
50	PFB0935w	predicted secreted protein
	PFB0940w	hypothetical protein
	PFB0945w	hypothetical protein
	PFB0950w	predicted integral membrane protein
	PFB0960c	hypothetical protein
55	PFB0965c	hypothetical protein
	PFB0970c	hypothetical protein

PFB0980w predicted integral membrane protein  
 PFB0985c predicted integral membrane protein  
 PFB0990c predicted secreted protein  
 PFB0995w predicted integral membrane protein

To determine whether non-globular domains and proteins are expressed in *P. falciparum*, RT-PCR was performed on 11 non-globular domains and two genes encoding predominantly non-globular proteins using total blood stage RNA as template. In all cases, RT-PCR products were the same size as those amplified from genomic DNA, and the sequence of RT-PCR products matched genomic DNA sequence (14). Thus, it is likely that most, if not all, predicted non-globular domains in chromosome 2 genes are expressed. One example of insertion of a non-globular domain into a well-defined globular domain is seen in a protein containing a 5'-3' exonuclease (Fig. 2). Figure 2. Multiple alignment of the predicted 5'-3' exonuclease (PFB0180w) encoded in chromosome 2 with homologous bacterial exonuclease domains showing the large non-globular insert in *Plasmodium*. The alignment was constructed using the profile alignment option of CLUSTALW (32). The alignment column shading is based on a 100% consensus, which is shown underneath the alignment; h indicates hydrophobic residues (A,C,F,I,L,M,V,W,Y; yellow background), u indicates "tiny" residues (G, A, S; green background), o indicates hydroxy residues (S, T), c indicates charged residues (D,E,K,R,H), and "+" indicates positively charged residues (K,R; purple coloring). The aspartates involved in metal coordination are shown by red background and inverse type. Secondary structure elements derived from the crystal structure of *Thermus aquaticus* DNA polymerase (15) are shown above the alignment (H indicates  $\alpha$ -helix, and E indicates extended conformation, or  $\beta$ -strand). 5'-3-exo\_Aae is a stand alone exonuclease from *Aquifex aeolicus*, and the remaining bacterial sequences are the N-terminal domains of DNA polymerase I. Alignment of the *Plasmodium* sequence with 4 bacterial exonucleases revealed a 176-amino acid insertion in a region between a strand and helix in the 3-dimensional structure of this protein (15). This suggests that eukaryotic proteins can accommodate inserts that may be excluded from the protein core folding without impairing protein function. The propagation of non-globular domains in *Plasmodium* suggests that such proteins provide specific selective advantages to the parasite. Structural analysis of *Plasmodium* proteins containing non-globular inserts may be valuable for understanding general principles of protein folding.

Of the 87 conserved proteins encoded on chromosome 2, 72 (83%) show greatest similarity to eukaryotic homologs (Table 2). By contrast, the remaining 15 proteins are most similar to bacterial proteins, and 4 of these represent the first eukaryotic members of protein families so far seen only in bacteria. At least some of these 15 genes

may have been transferred to the nuclear genome from an organellar genome after divergence of the phylum Apicomplexa from other eukaryotic lineages. Several of these proteins appear to contain N-terminal organellar import peptides (16) and may function within the apicoplast or the mitochondrion. One such gene encodes 3-ketoacyl-ACP synthase III (FabH), which catalyzes the condensation of acetyl-CoA and malonyl-ACP in Type II (dissociated) fatty acid synthase systems. Type II synthase systems are restricted to bacteria and the plastids of plants, confirming previous hypotheses that the *Plasmodium* apicoplast contains metabolic pathways distinct from those of the host (17, 18).

Because Apicomplexa represent a deep branch in the eukaryotic tree, the presence of eukaryotic-specific genes in *P. falciparum* suggests the appearance of these genes early in eukaryotic evolution. The majority of these genes code for proteins involved in DNA replication, repair, transcription, or translation (Table 2) and include the origin recognition complex subunit 5, excision repair proteins ERCC1 and RAD2, and proteins involved in chromatin dynamics, such as the BRAHMA helicase, an ortholog of the DRING protein containing the RING finger domain, and chromatin protein SNW1. Furthermore, several eukaryotic proteins involved in secretion are encoded in chromosome 2, such as SEC61 g subunit, the coated pit coatamer subunit, and syntaxin, suggesting early emergence of the eukaryotic secretory system.

Proteins of the DnaJ superfamily act as cofactors for HSP70-type molecular chaperones and participate in protein folding and trafficking, complex assembly, organelle biogenesis, and initiation of translation (19). Five proteins containing DnaJ domains are present on chromosome 2, which suggests multiple roles for this domain in the *Plasmodium* life cycle. Two of these consist primarily of the DnaJ domain, whereas three also contain a large non-globular domain. Several proteins containing a DnaJ domain have been detected on other chromosomes, indicating that this is a large gene family in *Plasmodium* (20). One of its members, the ring-infected erythrocyte surface antigen (RESA), binds to the cytoplasmic side of the erythrocyte membrane, suggesting that DnaJ domains perform chaperone-like functions in the formation of protein complexes at this location (21). DnaJ domains in some *P. falciparum* proteins contain substitutions in the His-Pro-Asp signature required for interaction with HSP-70-type proteins, which may indicate a modification of the typical chaperone function.

Chromosome 2 contains 5 protein families that are unique to *Plasmodium* in terms of their distinct domain organization, although 3 of them contain domains conserved in other genera. The genes encoding the *Plasmodium*-specific families are primarily located near the ends of the chromosome. A single var gene was identified in each subtelomeric region. The var genes encode large transmembrane proteins (PIEMP1) expressed in knobs on the surface

of schizont-infected red cells. PfEMP-1 proteins exhibit extensive sequence diversity, are clonally-variant, and are involved in antigenic variation, cytoadherence, and rosetting (5). In addition to the full-length var genes, 6 small ORFs were identified in the subtelomeric regions that had similarity to var sequences. Five of these resembled var exon II cDNAs or Pf60.1 sequences reported previously (22, 23).

5 The largest *Plasmodium*-specific family found on chromosome 2 encodes proteins that were dubbed rifins, after the RIF-1 repetitive element. First described by Weber (6), RIF-1 contained a 1 kb ORF but no initiation codon, was found on most chromosomes, and was transcribed in late blood stage parasites. The function of the RIF-1 element was unknown. Eighteen ORFs with similarity to RIF-1 were found in the subtelomeric regions of chromosome 2, centromeric to the var genes. Inspection of the sequence upstream of these ORFs revealed exons encoding signal peptides, indicating that the RIF-1 elements are actually genes consisting of 2 exons. These genes encode potential transmembrane proteins with predicted molecular weights of 27-35 kD with an extracellular domain containing conserved Cys residues which might participate in disulfide bonding, one or more transmembrane segments, and a short basic C-terminus that is intracellular. The extracellular domain also contains a highly variable region (Fig. 3). RT-PCR with schizont RNA showed that 1 of 6 rifin genes tested was transcribed. Figure 3. Multiple sequence alignment of rifins encoded on chromosome 2. The predicted coding regions were aligned with CLUSTALW (32) using the default settings. The alignment column shading is based on a 95% consensus, which is shown underneath the alignment; h indicates hydrophobic residues (A,C,F,I,L,M,V,W,Y; yellow background), p indicates polar residues (D,E,H,K,N,Q,R,S,T; red coloring), b indicates big residues (F,I,L,M,V,W,Y, K,R,Q,E; gray background), and "+" indicates positively charged residues (K,R; red coloring). The cysteines conserved in subsets of rifins are shown by blue shading and inverse coloring. The function of the rifins is unknown, but their sequence diversity, predicted cell surface localization, and expression in erythrocytic stages suggests that like var genes they may be clonally-variant. In addition, it is reasonable to expect that because they are predicted to be expressed on the red cell surface, the rifins interact with host ligands and are involved in cytoadherence, rosetting, or other pathogenic processes involving host-parasite interactions. This view is supported by others who suggest that the close proximity of the Rifin family of gene to the highly variable var genes means that the rifins encode for variable molecules that are present on the surface of the infected red cell (6a). Thus the rifins can reasonably be expected to be useful as targets of vaccine-induced immunity. Interference of the parasite-host interaction(s) mediated by rifins by the use of drugs that inhibit or prevent such interaction(s) can also be expected to have therapeutic benefits. Multiple rifin genes were detected in the

telomeric regions of chromosomes 3 and 14, suggesting that rifin genes have propagated as clusters in the course of *Plasmodium* evolution (24). If the number found on chromosome 2 is representative of other chromosomes, there may be 500 or more rifin genes in the *P.falciparum* genome (~7 % of all protein-coding genes), making it the most abundant gene family in this organism. The presence of var and rifin genes and other ORFs in subtelomeric regions of *P.falciparum* chromosomes confirms that the subtelomeric regions are not transcriptionally silent (25). Since our work was published (25a), others have confirmed that the rifins are transcribed, translated, and expressed on the surface of the parasite-infected red cell, and are clonally-variant (25b), and that rifin genes are located on other *P.falciparum* chromosomes (26c).

Another family of membrane-associated proteins, called SERAs (SErine Repeat Antigens), contain a papain protease-like domain. A cluster of 3 SERA genes, all transcribed in the same direction (from centromere to telomere), was known to be on chromosome 2 (26); at least one has been evaluated for use in blood stage vaccines. These genes are part of an 8-gene cluster; 7 genes have a similar 4 exon structure, but the gene at the 3' end of the cluster contains only 3 exons. The protease domains in these proteins are unusual in that 5 of the 8 contain serine instead of cysteine in the active nucleophile position, suggesting that they are serine proteases with a structure typical of cysteine proteases (27).

Two proteins were identified, MSP-4 and MSP-5, which contain an epidermal growth factor (EGF) module in their extracellular domains (28, 29). Together with MSP-1, a multi-EGF domain protein encoded on chromosome 3, and two *Plasmodium* sexual stage antigens (30), these are the only proteins outside the animal kingdom that contain EGF repeats, suggesting that the sequence for this domain was obtained by *Plasmodium* from its animal host. The plasmodial EGF domains may be involved in parasite adhesion to host cells.

In addition to the families of *Plasmodium*-specific proteins, chromosome 2 contains genes for many secreted and membrane proteins. One of these genes (PFB0570w) encodes a protein with a modified thrombospondin domain, and was transcribed in blood stage parasites. Other *Plasmodium* proteins containing thrombospondin domains, such as sporozoite surface protein 2/TRAP and circumsporozoite protein, are involved in parasite invasion of host cells (31), and it is reasonable to expect that the protein encoded by gene PFB0570w is involved in the binding of infected red cells or extracellular parasites to host cell ligands. Thus the protein encoded by PFB0570w can reasonably be expected to be useful as a target of vaccine-induced immunity. Interference of the parasite-host interaction(s) mediated by PFB0570w by the use of drugs that inhibit or prevent such interaction(s) can also be expected to have therapeutic

benefits. The other predicted transmembrane and secreted proteins encoded on chromosome 2, singly or in combinations, can also be expected to be useful as targets for vaccines. For example, other published work has shown that *Plasmodium* genes encoding parasite transmembrane or surface proteins can be inserted into mammalian expression vectors in order to construct DNA vaccines, that when used to immunize experimental animals, induce humoral and cellular immune responses to the *Plasmodium* protein(s), including protective cytotoxic T cell responses; (31a-h). A DNA vaccine encoding *P.falciparum* circumsporozoite protein has also been shown to induce cytotoxic T cell responses in human volunteers (31i). The predicted transmembrane and secreted proteins encoded on chromosome 2 can also be expected to induce protective cellular or humoral immune responses when formulated as DNA vaccines or as other types of vaccines such as recombinant proteins. Portions or fragments of the proteins that contain B or T cell epitopes encoded on chromosome 2 may also be used in the construction of vaccines (31e, 31j).

Determination of the first *P.falciparum* chromosome sequence demonstrates that the AT-richness of *P.falciparum* DNA will not prevent sequencing of the genome. Although technical difficulties not observed during the sequencing of other microbial genomes were encountered, solutions to these problems were found that will facilitate sequencing of the remaining chromosomes. The genome sequence will be of great value in the study of *Plasmodium* biology, and the development of new drugs and vaccines for the treatment and prevention of malaria. In addition to these practical benefits, the *Plasmodium* genome sequence will provide broader biological insights, particularly with regard to the plasticity of the eukaryotic genome manifest in the preponderance of the predicted non-globular domains in plasmodial proteins.

Having described the invention, the following examples are given to illustrate specific applications of the invention including the best mode now known to perform the invention. These specific examples are not intended to limit the scope of the invention described in this application.

Example 1. The genes that encode the family of Rifins will be amplified using the polymerase chain reaction and cloned into DNA vaccines - a plasmid vector designed to express the cloned fragment when injected into human or animal tissue. These Rifin vaccines will express the individual Rifin polypeptide using cellular protein expression systems. Each DNA vaccine will be designed to express an individual Rifin polypeptide. These polypeptides will then be taken up by antigen presenting cells and the host immune system will respond by producing either cellular or humoral immune responses directed at each of the expressed polypeptides. This immune response will prevent or reduce *Plasmodium falciparum* parasite development in host cells by preventing the invasion of parasites into

erythrocytes, or by opsonization which will result in the clearance of parasites by antibody mediated cellular immunity. These antibodies may act by blocking merozoite invasion of erythrocytes by blocking the initial interaction with the erythrocyte cell surface agglutinate merozoites before invasion or at, or immediately preceding, rupture of the mature schizont.; by killing the infected erythrocyte, via either complement-mediated lysis or phagocytosis; by preventing mature schizonts from adhering to endothelial cells (cytoadherence) by blocking receptor/ligand interactions, thereby preventing sequestration and enhancing splenic clearance; by preventing the release of, or inactivate, harmful toxins released from the infected erythrocyte; by antibody dependent or antibody independent cellular mechanisms directed against the merozoite in circulation or the intracellular parasite, including antibody dependent cellular inhibition (ADCI) or by antibody-dependent cellular cytotoxicity (ADCC); or by cytokines or other factors released by activated CD4+ T cells or non-T cells, or secreted by reticuloendothelial cells that directly kill the infected erythrocyte or kill/inactivate the intraerythrocytic parasite

Example 2. The genes involved in critical biochemical pathways, such as fatty acid biosynthesis can be identified as targets for antimalarial drug development. The identified polypeptides will be expressed as recombinant proteins and used in in vitro drug screening assays to identify chemical compounds that interfere with the normal functioning of the recombinant polypeptide. These drugs will then be taken through traditional drug development and to clinical trials for efficacy.

Example 3 The genes identified in chromosome 2 can be used to produce diagnostic reagents for laboratory or field detection of *P.falciparum* parasites. Using high throughput methods, such as DNA microarray technology or mass spectrometry , or other techniques, the genes and/or proteins that are identified to be expressed in abundance can be used to develop diagnostic reagents. For example, DNA probes can be designed which will hybridize to parasite nucleic acid extracts and then be useful to determine the presence of parasites in a clinical sample. Identified proteins that are shown to be highly expressed in blood stage parasites will be used to produce recombinant proteins used to produce antisera in experimental animals. These sera will then be used in diagnostic assays to detect parasites in clinical samples.

Example 4. The genes identified in chromosome 2 will be used in high throughput assays to identify those that are involved in the development of anti malarial drug resistance. These genes can then be exploited as in Example 3, in the development of drug resistant diagnostic tests. For example, antisera against the identified drug resistance proteins can be used in an ELISA assay to detect the expression of proteins in parasite extracts or clinical samples that



are involved in parasite-mediated drug resistance.

#### Example 5. Chromosome Sequencing and Assembly Method.

Chromosomes were resolved on preparative pulsed field gels (1.2% SeaPlaque GTG agarose, BioRad DRII apparatus, 180-250 sec switch time, 120 field angle, 3.7 V/cm for 90 hours at 14°C). Chromosome 2 bands from 5 gels were adjusted to 0.3 M sodium acetate to prevent melting of the AT-rich DNA and digested with agarase. Exposure to UV light was minimized. A shotgun library of 1-2 kb fragments was prepared in pUC18 as described [R. D. Fleischmann, et al., Science 269, 496-512 (1995)], except that treatment with E. coli DNA polymerase I was performed (0.5 mM dNTPs, 37°C for 10 minutes) after the second ligation step to close nicks prior to electroporation into DH10B cells. Because the gel-purified chromosome 2 DNA was only ~85% pure due to co-migration of sheared DNA from other chromosomes, and to provide excess coverage to compensate for possible non-randomness of the shotgun library, 23,768 sequences (~10X coverage) were obtained. FS+ dye-terminator chemistry (Perkin Elmer Applied Biosystems, catalog no. 4303141) was superior to dye-primer chemistry for sequencing of AT-rich DNA. Sequences were assembled using TIGR Assembler [G. S. Sutton, O. White, M. D. Adams, A. R. Kerlavage, Genome Sci. Technol. 1, 9-19 (1995)] modified to assemble AT-rich sequences. Neighboring contigs were identified using the program GROUPER (A. D. Mays, TIGR), and 10 groups of 114 contigs were mapped on the chromosome by comparison to STS markers [M. Lanzer, D. de Bruin, J. V. Ravetch, Nature 361, 654-657 (1993)]. Closure of physical and sequence gaps was performed as described [R. D. Fleischmann, et al., Science 269, 496-512 (1995)]. To close physical gaps, PCR reactions with genomic DNA template were done with primers from adjacent mapped groups, or from one mapped group and each of the unmapped groups. PCR reactions (Expand Long Template PCR System, Boehringer Mannheim 1681 842) contained 100 ng of genomic DNA and 15 pmol of each primer (BioServe Technologies) in a 50 µl reaction. Cycling conditions (Perkin Elmer GeneAmp PCR Systems 9600 or 9700) were 94°C for 2 min, followed by 10 cycles of 94°C for 1 min, 50 or 55°C for 1 min, and 60°C for 2 min, 20 cycles of 94°C for 1 min, 50 or 55°C for 1 min, and 60°C for 2 min plus 20 sec per cycle, and 1 cycle at 60°C for 10 min. PCR products were purified (QIAquick PCR Purification Kit; Qiagen 28104) and sequenced using dye-terminator chemistry. Sequence gaps that were too AT-rich for primer synthesis and walking were closed by insertion of the artificial transposon AT-2 [S. E. Devine, J. D. Boeke, Nucleic Acids Res. 22, 3765-3772 (1994)] into plasmid templates spanning each sequence gap; multiple transposon-containing subclones of each template were sequenced to close the gaps. The coverage criteria were that every position required at least double-clone coverage (or sequence from a PCR product amplified from

genomic DNA), and either sequence from both strands or with two different sequencing chemistries. The sequence was edited manually using TIGR Editor, and additional sequencing reactions were performed to improve coverage and resolve sequence ambiguities. To independently confirm colinearity of the assembled sequence and genomic DNA, NheI and BamHI optical restriction maps of chromosome 2 DNA were prepared [J. Jing et al., submitted for publication] and compared with restriction maps predicted from the sequence. The relative error of predicted and observed fragment sizes was 4.3% and 5.8% for the NheI and BamHI maps, respectively, indicating that the assembled sequence was an accurate representation of the chromosome. Further proof of colinearity was obtained by comparison of the sequence to a scaffold of YAC-end sequences from chromosome 2 YACs isolated from a library provided by K. Hinterberg [J. Foster, J. Thompson, *Parasitol. Today* 11, 1-4 (1995); L. Cummings et al.; in preparation].

#### References

1. Weekly Epidemiological Record 72, 269-276 (1997).
2. J. B. Dame, et al., *Mol. Biochem. Parasitol.* 79, 1-12 (1996); M. Lanzer, D. de Bruin, J. V. Ravetch, *Nature* 361, 654-657 (1993); K. Suplick, R. Akella, A. Saul, A. B. Vaidya, *Mol. Biochem. Parasitol.* 30, 289-290 (1988); M. J. Gardner, D. H. Williamson, R. J. M. Wilson, *Mol. Biochem. Parasitol.* 44, 115-124 (1991); R. J. M. Wilson, et al., *J. Mol. Biol.* 261, 155-172 (1996); S. Kohler, et al., *Science* 275, 1485-1489 (1997).
3. R. D. Fleischmann, et al., *Science* 269, 496-512 (1995); C. M. Fraser, et al., *Science* 270, 397-403 (1995); C. J. Bult, et al., *Science* 273, 1058-73 (1996); C. M. Fraser, et al., *Nature* 390, 580-586 (1997); J.-F. Tomb, et al., *Nature* 388, 539-547 (1997); H. P. Klenk, et al., *Nature* 390, 364-70 (1997); C. M. Fraser, et al., *Science* 281, 375-88 (1998).
4. *P. falciparum* clone 3D7 was selected because it can complete all stages of the life cycle, and was used in a genetic cross [D. Walliker, I. Quayki, T. E. Wellems, T. F. McCutchan, *Science* 236, 1661-1666 (1987)], and the Wellcome Trust Malaria Genome Mapping Project [J. Foster, J. Thompson, *Parasitol. Today* 11, 1-4 (1995)]. Parasites were grown in vitro [W. Trager, W. Jensen, *Nature* 273, 621-622 (1978)] and embedded in agarose [D. J. Kemp, et al., *Nature* 315, 347-50 (1985)]. Chromosomes were resolved on preparative pulsed field gels (1.2% SeaPlaque GTG agarose, BioRad DRIII apparatus, 180-250 sec switch time, 120 field angle, 3.7 V/cm for 90 hours at 14°C). Chromosome 2 bands from 5 gels were adjusted to 0.3 M sodium acetate to prevent melting of the AT-rich DNA and digested with agarase. Exposure to UV light was minimized. A shotgun library of 1-2 kb fragments was prepared in pUC18 as described [R. D. Fleischmann, et al., *Science* 269, 496-512 (1995)], except that treatment

with E. coli DNA polymerase I was performed (0.5 mM dNTPs, 37°C for 10 minutes) after the second ligation step to close nicks prior to electroporation into DH10B cells. Because the gel-purified chromosome 2 DNA was only ~85% pure due to co-migration of sheared DNA from other chromosomes, and to provide excess coverage to compensate for possible non-randomness of the shotgun library, 23,768 sequences (~10X coverage) were obtained.

5 FS+ dye-terminator chemistry (Perkin Elmer Applied Biosystems, catalog no. 4303141) was superior to dye-primer chemistry for sequencing of AT-rich DNA. Sequences were assembled using TIGR Assembler [G. S. Sutton, O. White, M. D. Adams, A. R. Kerlavage, *Genome Sci. Technol.* 1, 9-19 (1995)] modified to assemble AT-rich sequences. Neighboring contigs were identified using the program GROPER (A. D. Mays, TIGR), and 10 groups of 114 contigs were mapped on the chromosome by comparison to STS markers [M. Lanzer, D. de Bruin, J. V. Ravetch, *Nature* 361, 654-657 (1993)]. Closure of physical and sequence gaps was performed as described [R. D. Fleischmann, et al., *Science* 269, 496-512 (1995)]. To close physical gaps, PCR reactions with genomic DNA template were done with primers from adjacent mapped groups, or from one mapped group and each of the unmapped groups. PCR reactions (Expand Long Template PCR System, Boehringer Mannheim 1681 842) contained 100 ng of genomic DNA and 15 pmol of each primer (BioServe Technologies) in a 50 µl reaction.

15 Cycling conditions (Perkin Elmer GeneAmp PCR Systems 9600 or 9700) were 94°C for 2 min, followed by 10 cycles of 94°C for 1 min, 50 or 55°C for 1 min, and 60°C for 2 min, 20 cycles of 94°C for 1 min, 50 or 55°C for 1 min, and 60°C for 2 min plus 20 sec per cycle, and 1 cycle at 60°C for 10 min. PCR products were purified (QIAquick PCR Purification Kit; Qiagen 28104) and sequenced using dye-terminator chemistry. Sequence gaps that were too AT-rich for primer synthesis and walking were closed by insertion of the artificial transposon AT-2 [S. E. Devine, J. D. Boeke, *Nucleic Acids Res.* 22, 3765-3772 (1994)] into plasmid templates spanning each sequence gap; multiple transposon-containing subclones of each template were sequenced to close the gaps. The coverage criteria were that every position required at least double-clone coverage (or sequence from a PCR product amplified from genomic DNA), and either sequence from both strands or with two different sequencing chemistries. The sequence was edited manually using TIGR Editor, and additional sequencing reactions were performed to improve

20 coverage and resolve sequence ambiguities. To independently confirm colinearity of the assembled sequence and genomic DNA, NheI and BamHI optical restriction maps of chromosome 2 DNA were prepared [J. Jing et al., submitted for publication] and compared with restriction maps predicted from the sequence. The relative error of predicted and observed fragment sizes was 4.3% and 5.8% for the NheI and BamHI maps, respectively, indicating

25

that the assembled sequence was an accurate representation of the chromosome. Further proof of colinearity was obtained by comparison of the sequence to a scaffold of YAC-end sequences from chromosome 2 YACs isolated from a library provided by K. Hinterberg [J. Foster, J. Thompson, *Parasitol. Today* 11, 1-4 (1995); L. Cummings et al.; in preparation].

- 5 5. D. I. Baruch, et al., *Cell* 82, 77-87 (1995); Z. Su, et al., *Cell* 82, 89-100 (1995); J. D. Smith, et al., *Cell* 82, 101-110 (1995); J. A. Rowe, J. M. Moulds, C. I. Newbold, L. H. Miller, *Nature* 388, 292-295 (1997).
6. J. L. Weber, *Mol Biochem Parasitol* 29, 117-24 (1988).
- 6a. M. Wahlgren, et al, *Cell* 96, 603-606 (1999).
7. K. D. Vernick, T. F. McCutchan, *Mol Biochem Parasitol* 28, 85-94 (1988).
- 10 8. P. Oquendo, et al., *Mol Biochem Parasitol* 18, 89-101 (1986); J. Patarapotikul, G. Langsley, *Nucleic Acids Res* 16, 4331-40 (1988).
9. S. Saitoh, K. Takahashi, M. Yanagida, *Cell* 90, 131-43 (1997); M. M. Smith, et al., *Mol Cell Biol* 16, 1017-26 (1996); M. M. Mahtani, H. F. Willard, *Genome-Res* 8, 100-10 (1998); R. D. Shelby, O. Vafa, K. F. Sullivan, *J Cell Biol* 136, 501-13 (1997); D. du Sart, et al., *Nat Genet* 16, 144-53 (1997).
- 15 10. J. Lechner, J. Ortiz, *Febs Lett* 389, 70-4 (1996); A. A. Hyman, P. K. Sorger, *Annu Rev Cell Dev Biol* 11, 471-95 (1995).
11. The non-redundant (NR) protein sequence database at the National Center for Biotechnology Information (NIH, Bethesda) was searched using the gapped BLAST and PSI-BLAST programs. Coding regions were predicted using GlimmerM [S. L. Salzberg, M. Pertea, A. Delcher, M. J. Gardner, H. Tettelin, *Genomics* 59, 24-31 (1999)], a  
20 eukaryotic gene-finding program based on Glimmer [S. L. Salzberg, A. L. Delcher, S. Kasif, O. White, *Nucleic Acids Res* 26, 544-8 (1998)], trained on a set of 117 *P.falciparum* sequences. Gene models based on Glimmer predictions, similarity of ORFs to known proteins, and prediction of putative signal peptides and transmembrane domains were constructed with ANNOTATOR (Lixin Xhou, TIGR). In cases where a putative gene had no database match and multiple GlimmerM predictions of gene structure, the highest scoring model was reported. After the first  
25 set of models were inspected, they were added to the training set and GlimmerM was re-trained. Gene models should be regarded as preliminary until confirmed by other methods. Protein structural features were delineated using the UniPred program of the SEALS package [D. R. Walker, E. V. Koonin, *Ismb* 5, 333-9 (1997)]. Signal peptides were predicted with SignalP [H. Nielsen, J. Engelbrecht, S. Brunack, G. von Heijne, *Protein Eng* 10, 1-6

(1997)], and transmembrane helices were predicted using PHThm [B. Rost, R. Casadio, P. Fariselli, C. Sander, Protein Sci 4,521-533 (1995)]. Coiled coil domains were predicted using COILS (John Kuzio, NCBI). Non-globular structures were predicted using SEG [J. C. Wootton, S. Federhen, Methods Enzymol 266, 554-571 (1996)]. Multiple sequence alignments were constructed using CLUSTALW or the Gibbs-sampling option of the MACAW program [G.D. Schuler, S. F. Altschul, D. J. Lipman, Proteins 9, 180-190 (1991); A. F. Neuwald, J. S. Liu, C. E. Lawrence, Protein Sci 4,1618-1632 (1995)]. Transfer RNAs were identified with tRNAscan [T. M. Lowe, S. R. Eddy, Nucleic Acids Res 25, 955-64 (1997)]. Systematic gene names based on a scheme used for *S. cerevisiae* [H. W. Mewes, et al., Nature 387, 7-65 (1997)] were assigned using the convention PF (for *P. falciparum*), a letter for the chromosome (A for chromosome 1, B for chromosome 2, etc.), a 3-digit code ordering the genes from left-to-right in increments of 5 (to allow for addition of new genes), and a letter denoting the coding strand (w or c).

12. The term "non-globular" refers to proteins or domains of proteins that do not assume compact, folded structures [J. C. Wootton, Comput Chem 18, 269-85 (1994)]. There is a strong inverse correlation between compositional bias in protein sequences and their ability to fold into a compact, globular domain [J. C. Wootton, S. Federhen, Methods Enzymol 266, 554-571 (1996)]. Accordingly, the compositional complexity of a sequence can be used to partition it into predicted globular and non-globular domains. In this analysis, this prediction was performed using the SEG program with the following parameters: window length 45, trigger complexity 3.4, extension complexity 3.75.

13. L. Aravind and E. Koonin, unpublished data.

14. D. J. Carucci et al., data not shown.

15. Y. Kim, et al., Nature 376, 612-6 (1995).

16. V. Haucke, G. Schatz, Trends Cell biol 7, 103-106 (1997).

17. A. R. Slabas, T. Fawcett, Plant Mol Biol 19, 169-91 (1992); R. J. M. Wilson, M. J. Gardner, J. E. Feagin, D. H. Williamson, Parasitol Today 7, 134-136 (1991).

18. After this manuscript was submitted for publication, we learned of work that confirms the identification of the 3-ketoacyl-ACP synthase III gene in *Plasmodium*, and importation of nuclear-encoded proteins into the apicoplast in the related parasite *Toxoplasma* [R. F. Waller, et. al., Proc. Natl. Acad. Sci USA, in press].

19. D. M. Cyr, T. Langer, M. G. Douglas, Trends Biochem Sci 19, 176-81 (1994).

20. L. Aravind et. al., data not shown.

21. P. Bork, C. Sander, A. Valencia, B. Bukau, Trends Biochem Sci 17, 129 (1992); J. Watanabe, Mol Biochem

- Parasitol 88, 253-8 (1997); R. L. Coppel, et al., Nature 310, 789-92 (1984); I. A. Quakyi, et al., Infect Immun 57, 833-9 (1989); M. Foley, L. Corcoran, L. Tilley, R. Anders, Exp Parasitol 79, 340-50 (1994).
22. Z. Su, et al., Cell 82, 89-100 (1995).
23. S. Bonnefoy, E. Bischoff, M. Guillotte, O. Mercereau-Puijalon, Mol Biochem Parasitol 87, 1-11 (1997).
- 5 24. Sequence data for *P.falciparum* chromosome 3 was obtained from The Sanger Centre website at [http://www.sanger.ac.uk/Projects/P\\_falciparum/](http://www.sanger.ac.uk/Projects/P_falciparum/). Sequencing of *P.falciparum* chromosome 3 was accomplished as part of the Malaria Genome Project with support by The Wellcome Trust.
25. R. R. Hernandez, et al., Mol Cell Biol 17, 604-11 (1997); K. Fischer, et al., Mol Cell Biol 17, 3679-86 (1997).
- 25a. M. J. Gardner, H. Tettelin, D. J. Carucci, L. M. Cummings, L. Aravind, E. V. Koonin, S. Shallom, T. Mason, K. Yu, C. Fujii, J. Pedersen, K. Shen, J. Jing, D. C. Schwartz, M. Pertea, S. Salzberg, L. Zhou, G. G. Sutton, R. L. Clayton, O. White, H. O. Smith, C. M. Fraser, M. D. Adams, J. C. Venter, S. L. Hoffman, Science 282, 1126-1132 (1998).
- 10 25b. S. A. Kyes, J. A. Rowe, N. Kriek, C. I. Newbold, Proc Natl Acad Sci U S A 96, 9333-8 (1999).
- 25c. 1. Q. Cheng, N. Cloonan, K. Fischer, J. Thompson, G. Waine, M. Lanzer, A. Saul, Mol Biochem Parasitol 97, 161-76 (1998).
- 15 26. B. Knapp, E. Hundt, U. Nau, H. A. Kupper, Mol Biochem Parasitol 32, 73-83 (1989); B. Knapp, U. Nau, E. Hundt, H. A. Kupper, Mol Biochem Parasitol 44, 1-13 (1991); W. B. Li, D. J. Bzik, T. Horii, J. Inselburg, Mol Biochem Parasitol 33, 13-25 (1989); B. A. Fox, D. J. Bzik, Mol. Biochem. Parasitol. 68, 133-144 (1994).
27. D. G. Higgins, D. J. McConnell, P. M. Sharp, Nature 340, 604 (1989); A. E. Eakin, J. M. Higaki, J H, C. S. Craik, 20 ibid., 342, 132 (1989).
28. V. M. Marshall, et al., Infect Immun 65, 4460-7 (1997).
29. V. M. Marshall, W. Tieqiao, R. L. Coppel, Mol Biochem Parasitol 94, 13-25 (1998).
30. L. Aravind, unpublished observations and M. J. Blackman, I. T. Ling, S. C. Nicholls, A. A. Holder, Mol Biochem Parasitol 49, 29-33 (1991); D. C. Kaslow, et al., Nature 333, 74-6 (1988); P. E. Duffy, P. Pimenta, D. C. Kaslow, J 25 Exp Med 177, 505-10 (1993).
31. K. J. Robson, et al., Nature 335, 79-82 (1988); C. Cerami, et al., Cell 70, 1021-1033 (1992); W. O. Rogers, et al., Proc. Natl. Acad. Sci. USA 89, 9176-9180 (1992).
- 31a. M. Sedegah, R. Hedstrom, P. Hobart, S. L. Hoffman, Proceedings of the National Academy of Sciences of the



United States of America 91, 9866-9870 (1994).

31b. 1. D. L. Doolan, M. Sedegah, R. C. Hedstrom, P. Hobart, Y. Charoenvit, S. L. Hoffman, *Journal of Experimental Medicine* 183, 1739-1746 (1996).

31c. 1. R. A. Gramzinski, D. C. Maris, R. Obaldia, R. Rossan, M. Sedegah, R. Wang, P. Hobart, M. Margalith, S. L. Hoffman, *Vaccine Research* 5, 173-183 (1996).

31d. R. Wang, D. L. Doolan, Y. Charoenvit, R. C. Hedstrom, M. J. Gardner, P. Hobart, J. Tine, V. Fallarme, J. B. J. Sacci, M. Kaur, D. J. Klinman, S. L. Hoffman, W. R. Weiss, *Infection and Immunity* 66, 4193-4202 (1998).

31e. S. L. Becker, R. Wang, R. C. Hedstrom, J. C. Aguiar, T. C. Jones, S. L. Hoffman, M. J. Gardner, *Infection and Immunity* 66, 3457-3461 (1998).

31f. R. C. Hedstrom, D. L. Doolan, R. Wang, A. Kumar, J. B. J. Sacci, M. J. Gardner, J. C. Aguiar, Y. Charoenvit, M. Sedegah, J. A. Tine, M. Margalith, P. Hobart, S. L. Hoffman, *International Journal of Molecular Medicine* 2, 29-38 (1998).

31g. S. L. Hoffman, D. L. Doolan, M. Sedegah, J. C. Aguiar, R. Wang, A. Malik, R. A. Gramzinski, W. R. Weiss, P. Hobart, J. A. Norman, M. Margalith, R. C. Hedstrom, *Vaccine* 15, 842-5 (1997).

31h. S. L. Hoffman, W. O. Rogers, D. J. Carucci, J. C. Venter, *Nat Med* 4, 1351-3 (1998).

31j. D. L. Doolan, S. L. Hoffman, S. Southwood, P. A. Wentworth, J. Sidney, R. W. Chesnut, E. Keogh, E. Appella, T. B. Nutman, A. A. Lal, D. M. Gordon, A. Oloo, A. Sette, *Immunity* 7, 97-112 (1997).

32. J. D. Thompson, D. G. Higgins, T. J. Gibson, *Nucleic Acids Res* 22, 4673-80 (1994).

Obviously, many modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

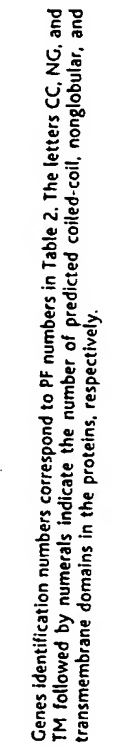
What is claimed is:

1. The nucleotide sequences encoding the proteins of chromosome 2 of *Plasmodium falciparum* and fragments thereof.
2. The proteins encoded by chromosome 2 of *Plasmodium falciparum* and fragments thereof.
- 5 3. The proteins of Claim 2 known as rifins.
4. The proteins of Claim 2 wherein said proteins are secreted or membrane proteins.
5. A vaccine for *Plasmodium falciparum* infection comprising a nucleotide sequence of Claim 1.
6. A vaccine for *Plasmodium falciparum* infection comprising a protein of Claim 2.
7. A vaccine for *Plasmodium falciparum* infection comprising a nucleotide sequence encoding a rifin of Claim 3.
- 10 8. A vaccine for *Plasmodium falciparum* infection comprising a rifin polypeptide of Claim 3.
9. A vaccine for *Plasmodium falciparum* infection comprising a nucleotide sequence encoding a secreted or membrane protein of Claim 4.
10. A vaccine for *Plasmodium falciparum* infection comprising a secreted or membrane protein of Claim 4.
11. A means of detecting infection with *Plasmodium falciparum* by collecting a suspect sample, and subjecting the  
15 sample to a diagnostic test comprising the nucleotide sequences of Claim 1, the diagnostic test comprising polymerase chain reaction or nucleic acid hybridization.
12. A means of detecting infection with *Plasmodium falciparum* by collecting a suspect sample, and subjecting the sample to a diagnostic test comprising polyclonal antisera or a monoclonal antibody raised to immunogens comprising the protein sequences of Claim 2, the diagnostic test comprising Western blot analysis or enzyme-  
20 linked immunoassay (ELISA).
13. A means of detecting infection with *Plasmodium falciparum* by collecting a suspect sample, and subjecting the sample to a diagnostic test comprising the nucleotide sequences encoding the rifins of Claim 3, the diagnostic test comprising polymerase chain reaction or nucleic acid hybridization.
14. A means of detecting infection with *Plasmodium falciparum* by collecting a suspect sample, and subjecting the  
25 sample to a diagnostic test comprising polyclonal antisera or a monoclonal antibody raised to immunogens comprising the rifins of Claim 3, the diagnostic test comprising Western blot analysis or enzyme-linked immunoassay (ELISA).
15. A means of detecting infection with *Plasmodium falciparum* by collecting a suspect sample, and subjecting the



sample to a diagnostic test comprising the nucleotide sequences comprising the secreted and membrane proteins of Claim 4, the diagnostic test comprising polymerase chain reaction or nucleic acid hybridization.

16. A means of detecting infection with *Plasmodium falciparum* by collecting a suspect sample, and subjecting the sample to a diagnostic test comprising polyclonal antisera or a monoclonal antibody raised to immunogens comprising the secreted or membrane proteins of Claim 3, the diagnostic test comprising Western blot analysis or enzyme-linked immunoassay (ELISA).
17. Polyclonal antisera raised against polypeptides comprising the protein sequences of Claim 2.
18. Monoclonal antibodies raised against polypeptides comprising the protein sequences of Claim 2.
19. The use of proteins or fragments thereof in Claim 2 for the identification of drugs to treat or prevent *Plasmodium falciparum* infection.
20. A method of use of rifins or fragments thereof in Claim 3 for the identification of drugs to treat or prevent *Plasmodium falciparum* infection.
21. A method of use of secreted or membrane proteins or fragments thereof in Claim 4 for the identification of drugs to treat or prevent *Plasmodium falciparum* infection.
22. A method of use of proteins or fragments thereof in Claim 2 for the identification or diagnosis of drug resistance in *Plasmodium falciparum*.
23. The A method of use of rifins or fragments thereof in Claim 3 for the identification of drug resistance in *Plasmodium falciparum*.
24. A method of use of secreted or membrane proteins or fragments thereof in Claim 4 for the identification of drug resistance in *Plasmodium falciparum*.



**Fig. 1.** Gene map of *P. falciparum* chromosome 2. Predicted coding regions are shown on each strand. Exons of protein-encoding genes are indicated by rectangles, and lines linking rectangles represent introns. The single tRNA<sup>cys</sup> gene is indicated by a cloverleaf structure. Genes are color-coded according to broad role categories as shown in the key.

## 1

PF0180w  
DP01\_THZAQ\_118828  
5'-3'-exo\_Aae\_2983968  
DP01\_BACCA\_416913  
DP01\_ECOLI\_118825  
consensus/100%

PPH0180w  
DP01\_TH2AQ\_118828  
5'-3-exo\_Ase\_2983968  
DP01\_BACCA\_416913  
DP01\_ECOLI\_118825  
consensus/100%

PPB0180W  
DP01\_TH2AQ\_118828  
5'-3'-exo\_Aae\_2983968  
DP01\_BACCA\_416913  
DP01\_ECOLI\_118825  
consensus/100%

PF0180W  
DP01\_THEAQ\_118828  
5'-3'-exo\_Aae\_2983968  
DP01\_BACCA\_416913  
DP01\_ECOLI\_118825  
consensus/100t

Fig. 2. Multiple alignment of the predicted 5'-3' exonuclease (PF0180w) encoded in chromosome 2 with homologous bacterial exonuclease domains showing the large nonglobular insert in *Plasmodium*. The alignment was constructed with the profile alignment option of CLUSTALW [34]. The alignment column shading is based on a 100% consensus, which is shown underneath the alignment; h indicates hydrophobic residues (A, C, F, I, L, M, V, W, and Y; yellow background), u indicates "tiny" residues (G, A, and S; green background), o indicates hydroxy residues (S and T), c indicates charged residues (D, E, K, R, and H), and + indicates positively charged residues (K and R; purple coloring) [35]. The aspartates involved in metal coordination have a red background and inverse type. Secondary structure elements derived from the crystal structure of *Thermus aquaticus* DNA polymerase [18] are shown above the alignment (H indicates  $\alpha$  helix, and E indicates extended conformation, or  $\beta$  strand). 5'-3'-exo-Aae is a stand-alone exonuclease from *Aquifex aeolicus*, and the remaining bacterial sequences are the NH<sub>2</sub>-terminal domains of DNA polymerase I.

# REPORTS

Signal peptide → Conserved ("constant") region →

PPB1010w  
PPB1015w  
PPB1005w  
PPB0053c  
PPB1050w  
PPB0013c  
PPB0010c  
PPB0010c  
PPB0013c  
PPB0060w  
PPB1000w  
PPB0073c  
PPB0065w  
PPB1010w  
PPB0055w  
Consensus/951

Variable region

PPB1010w  
PPB1015w  
PPB1005w  
PPB0053c  
PPB1050w  
PPB0013c  
PPB0010c  
PPB0010c  
PPB0013c  
PPB0060w  
PPB1000w  
PPB0073c  
PPB0065w  
PPB1010w  
PPB0055w  
Consensus/951

Variable region

PPB1010w  
PPB1015w  
PPB1005w  
PPB0053c  
PPB1050w  
PPB0013c  
PPB0010c  
PPB0010c  
PPB0013c  
PPB0060w  
PPB1000w  
PPB0073c  
PPB0065w  
PPB1010w  
PPB0055w  
Consensus/951

Variable region → Transmembrane region → Intracellular region

PPB1010w  
PPB1015w  
PPB1005w  
PPB0053c  
PPB1050w  
PPB0013c  
PPB0010c  
PPB0010c  
PPB0013c  
PPB0060w  
PPB1000w  
PPB0073c  
PPB0065w  
PPB1010w  
PPB0055w  
Consensus/951

Fig. 3.

## SEQUENCE LISTING

&lt;120&gt;

&lt;130&gt;

&lt;160&gt; 420

&lt;170&gt; PatentIn Ver. 2.1

&lt;210&gt; 1

&lt;211&gt; 1700

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 1

Met Ala Thr Gly Ser Gly Gly Asp Ser Ser Arg Asp Glu Ser Val Lys  
 1 5 10 15

Asp Leu Phe Asp Arg Ile Gly Lys Lys Val Tyr Glu Lys Thr Glu Lys  
 20 25 30

Ile Ala Lys Arg Tyr Thr Thr Glu Leu His Gly Asp Leu Ser Lys Ala  
 35 40 45

Thr Tyr Pro Asn Asp Lys His Pro Glu Gly Ser Thr Glu Asn Asn Pro  
 50 55 60

Cys Lys Leu Gln Tyr Asp Tyr Asn Thr Asn Val Thr His Gly Phe Gly  
 65 70 75 80

Gln Glu Tyr Pro Cys Glu Thr Asp Ile Val Glu Arg Phe Ser Asp Thr  
 85 90 95

Glu Gly Ala Gln Cys Asp Lys Lys Lys Ile Lys Asp Asn Ser Glu Gly  
 100 105 110

Ala Cys Ala Pro Tyr Arg Arg Leu His Val Cys Val Arg Asn Leu Glu  
 115 120 125

Asn Ile Asn Asp Tyr Ser Lys Ile Asn Asn Lys His Asn Leu Leu Val  
 130 135 140

Glu Val Cys Leu Ala Ala Lys Tyr Glu Gly Glu Ser Ile Thr Gly Arg  
 145 150 155 160

Tyr Pro Gln His Gln Glu Thr Asn Pro Asp Thr Lys Ser Gln Leu Cys  
 165 170 175

Thr Val Leu Ala Arg Ser Phe Ala Asp Ile Gly Asp Ile Ile Arg Gly  
 180 185 190

Lys Asp Leu Tyr Arg Gly Gly Asn Thr Lys Glu Lys Lys Lys Arg Lys  
 195 200 205

Lys Leu Glu Glu Asn Leu Lys Thr Ile Phe Gly His Ile Tyr Asp Glu  
 210 215 220

Leu Lys Asn Gly Lys Thr Asn Gly Glu Glu Glu Leu Gln Lys Arg Tyr  
 225 230 235 240

Arg Gly Asp Lys Asp Asn Asp Phe Tyr Gln Leu Arg Glu Asp Trp Trp  
 245 250 255

Asp Ala Asn Arg Glu Thr Val Trp Lys Ala Ile Thr Cys Asn Ala Gly  
 260 265 270

Ser Tyr Gln Tyr Ser Gln Pro Thr Cys Gly Arg Gly Glu Ile Pro Tyr  
 275 280 285

Val Thr Leu Ser Lys Cys Gln Cys Ile Ala Gly Glu Val Pro Thr Tyr  
 290 295 300  
 Phe Asp Tyr Val Pro Gln Tyr Leu Arg Trp Phe Glu Glu Trp Ala Glu  
 305 310 315 320  
 Asp Phe Cys Arg Lys Lys Lys Lys Lys Ile Pro Asn Val Lys Thr Asn  
 325 330 335  
 Cys Arg Gln Val Gln Arg Gly Lys Glu Lys Tyr Cys Asp Arg Asp Gly  
 340 345 350  
 Tyr Asn Cys Asp Gly Thr Ile Arg Lys Gln Tyr Ile Tyr Arg Leu Asp  
 355 360 365  
 Thr Asp Cys Thr Lys Cys Ser Leu Ala Cys Lys Thr Phe Ala Glu Trp  
 370 375 380  
 Ile Asp Asn Gln Lys Glu Gln Phe Asp Lys Gln Lys Gln Lys Tyr Gln  
 385 390 395 400  
 Asn Glu Ile Ser Gly Gly Gly Gly Arg Arg Gln Lys Arg Ser Thr His  
 405 410 415  
 Ser Thr Lys Glu Tyr Glu Gly Tyr Glu Lys His Phe Asn Glu Glu Leu  
 420 425 430  
 Arg Asn Glu Gly Lys Asp Val Arg Ser Phe Leu Gln Leu Leu Ser Lys  
 435 440 445  
 Glu Lys Ile Cys Lys Glu Arg Ile Gln Val Gly Glu Glu Thr Ala Asn  
 450 455 460  
 Tyr Gly Asn Phe Glu Asn Glu Ser Asn Thr Phe Ser His Thr Glu Tyr  
 465 470 475 480  
 Cys Asp Arg Cys Pro Leu Cys Gly Val Asp Cys Ser Ser Asp Asn Cys  
 485 490 495  
 Pro Phe Asx Trp Ala Thr Gly Gly Cys Gly Ala Cys Thr Gly Gly Thr  
 500 505 510  
 Ala Gly Thr Gly Gly Gly Gly Gly Cys Gly Ala Thr Ala Gly Thr Thr  
 515 520 525  
 Cys Ala Cys Gly Gly Gly Ala Thr Gly Ala Ala Ala Gly Thr Gly Thr  
 530 535 540  
 Cys Ala Ala Ala Gly Ala Thr Thr Thr Ala Thr Thr Thr Gly Ala Thr  
 545 550 555 560  
 Ala Gly Ala Ala Thr Ala Gly Gly Gly Ala Ala Gly Ala Ala Ala Gly  
 565 570 575  
 Thr Thr Thr Ala Cys Gly Ala Ala Ala Ala Ala Cys Ala Gly Ala  
 580 585 590  
 Ala Ala Ala Gly Ala Thr Thr Gly Cys Ala Ala Ala Ala Cys Gly Ala  
 595 600 605  
 Thr Ala Thr Ala Cys Thr Ala Cys Thr Gly Ala Ala Thr Thr Gly Cys  
 610 615 620  
 Ala Thr Gly Gly Thr Gly Ala Thr Thr Thr Gly Thr Cys Ala Ala Ala  
 625 630 635 640  
 Ala Gly Cys Ala Ala Cys Ala Thr Ala Thr Cys Cys Ala Ala Ala Thr  
 645 650 655  
 Gly Ala Thr Ala Ala Ala Cys Ala Thr Cys Cys Thr Gly Ala Ala Gly

660										665					670				
Gly	Ala	Thr	Cys	Ala	Ala	Cys	Ala	Gly	Ala	Ala	Ala	Ala	Ala	Thr	Ala	Ala			
		675					680						685						
Thr	Cys	Cys	Ala	Thr	Gly	Cys	Ala	Ala	Ala	Cys	Thr	Thr	Cys	Ala	Ala				
	690					695					700								
Thr	Ala	Thr	Gly	Ala	Thr	Thr	Ala	Thr	Ala	Ala	Thr	Ala	Cys	Thr	Ala				
	705				710				715							720			
Ala	Thr	Gly	Thr	Thr	Ala	Cys	Thr	Cys	Ala	Thr	Gly	Gly	Thr	Thr	Thr				
				725					730							735			
Thr	Gly	Gly	Thr	Cys	Ala	Ala	Gly	Ala	Gly	Thr	Ala	Thr	Cys	Cys	Thr				
			740					745					750						
Thr	Gly	Thr	Gly	Ala	Ala	Ala	Cys	Gly	Gly	Ala	Cys	Ala	Thr	Ala	Gly				
			755					760					765						
Thr	Ala	Gly	Ala	Ala	Cys	Gly	Thr	Thr	Thr	Thr	Cys	Thr	Gly	Ala					
	770					775					780								
Thr	Ala	Cys	Ala	Gly	Ala	Ala	Gly	Gly	Ala	Gly	Cys	Ala	Cys	Ala	Ala				
	785				790						795					800			
Thr	Gly	Thr	Gly	Ala	Thr	Ala	Ala	Gly	Ala	Ala	Ala	Ala	Ala	Ala	Ala				
				805					810							815			
Thr	Ala	Ala	Ala	Ala	Gly	Ala	Thr	Ala	Ala	Thr	Ala	Gly	Thr	Gly	Ala				
				820				825						830					
Ala	Gly	Gly	Ala	Gly	Cys	Thr	Thr	Gly	Cys	Gly	Cys	Thr	Cys	Cys	Ala				
			835				840												
Thr	Ala	Thr	Ala	Gly	Ala	Cys	Gly	Ala	Thr	Thr	Ala	Cys	Ala	Thr	Gly				
	850					855					860								
Thr	Ala	Thr	Gly	Cys	Gly	Thr	Thr	Ala	Gly	Ala	Ala	Ala	Thr	Thr	Thr				
	865				870						875					880			
Gly	Gly	Ala	Ala	Ala	Ala	Thr	Ala	Thr	Cys	Ala	Ala	Thr	Gly	Ala	Thr				
				885					890					895					
Thr	Ala	Thr	Ala	Gly	Thr	Ala	Ala	Ala	Ala	Thr	Thr	Ala	Ala	Thr	Ala				
			900					905						910					
Ala	Thr	Ala	Ala	Ala	Cys	Ala	Thr	Ala	Ala	Thr	Thr	Thr	Ala	Thr	Thr				
		915					920						925						
Gly	Gly	Thr	Ala	Gly	Ala	Ala	Gly	Thr	Gly	Thr	Gly	Thr	Cys	Thr	Thr				
						935					940								
Gly	Cys	Ala	Gly	Cys	Cys	Ala	Ala	Ala	Thr	Ala	Thr	Gly	Ala	Ala	Gly				
	945				950						955					960			
Gly	Gly	Gly	Ala	Ala	Thr	Cys	Ala	Ala	Thr	Ala	Ala	Cys	Ala	Gly	Gly				
				965					970					975					
Thr	Cys	Gly	Thr	Thr	Lys	Thr	Asp	Arg	Gln	Arg	Gln	Glu	Phe	Trp	Gly				
			980					985					990						
Thr	Tyr	Gly	Lys	Asp	Ile	Trp	Lys	Gly	Met	Leu	Cys	Ala	Leu	Gln	Glu				
		995					1000					1005							
Ala	Gly	Gly	Lys	Lys	Thr	Leu	Thr	Glu	Thr	Tyr	Asn	Tyr	Ser	Asn	Val				
						1015					1020								
Thr	Phe	Asn	Gly	His	Leu	Thr	Gly	Thr	Lys	Leu	Asn	Glu	Phe	Ala	Ser				
	1025				1030						1035				1040				

Arg Pro Ser Phe Leu Arg Trp Met Thr Glu Trp Gly Asp Gln Phe Cys  
 1045 1050 1055  
 Arg Glu Arg Ile Thr Gln Leu Gln Ile Leu Lys Glu Arg Cys Met Val  
 1060 1065 1070  
 Tyr Gln Tyr Asn Gly Asp Lys Gly Lys Asp Asp Lys Lys Glu Lys Cys  
 1075 1080 1085  
 Thr Glu Ala Cys Thr Tyr Tyr Lys Glu Trp Leu Thr Asn Trp Gln Asp  
 1090 1095 1100  
 Asn Tyr Lys Lys Gln Asn Gln Arg Tyr Thr Glu Val Lys Gly Thr Ser  
 1105 1110 1115 1120  
 Pro Tyr Lys Glu Asp Ser Asp Val Lys Glu Ser Lys Tyr Ala His Gly  
 1125 1130 1135  
 Tyr Leu Arg Lys Ile Leu Lys Asn Ile Ile Cys Thr Ser Gly Thr Asp  
 1140 1145 1150  
 Ile Ala Tyr Cys Asn Cys Met Glu Gly Thr Ser Thr Thr Asp Ser Ser  
 1155 1160 1165  
 Asn Asn Asp Asn Ile Pro Glu Ser Leu Lys Tyr Pro Pro Ile Glu Ile  
 1170 1175 1180  
 Glu Glu Gly Cys Thr Cys Lys Asp Pro Ser Pro Gly Glu Val Ile Pro  
 1185 1190 1195 1200  
 Glu Lys Lys Val Pro Glu Pro Lys Val Leu Pro Lys Pro Pro Lys Leu  
 1205 1210 1215  
 Pro Lys Arg Gln Pro Lys Glu Arg Asp Phe Pro Thr Pro Ala Leu Lys  
 1220 1225 1230  
 Asn Ala Met Leu Ser Ser Thr Ile Met Trp Ser Ile Gly Ile Gly Phe  
 1235 1240 1245  
 Ala Thr Phe Thr Tyr Phe Tyr Leu Lys Lys Lys Thr Lys Ser Thr Ile  
 1250 1255 1260  
 Asp Leu Leu Arg Val Ile Asn Ile Pro Lys Ser Asp Tyr Asp Ile Pro  
 1265 1270 1275 1280  
 Thr Lys Leu Ser Pro Asn Arg Tyr Ile Pro Tyr Thr Ser Gly Lys Tyr  
 1285 1290 1295  
 Arg Gly Lys Arg Tyr Ile Tyr Leu Glu Gly Asp Ser Gly Thr Asp Ser  
 1300 1305 1310  
 Gly Tyr Thr Asp His Tyr Ser Asp Ile Thr Ser Ser Ser Glu Ser Glu  
 1315 1320 1325  
 Tyr Glu Glu Leu Asp Ile Asn Asp Ile Tyr Ala Pro Arg Ala Pro Lys  
 1330 1335 1340  
 Tyr Lys Thr Leu Ile Glu Val Val Leu Glu Pro Ser Gly Asn Asn Thr  
 1345 1350 1355 1360  
 Thr Ala Ser Gly Asn Asn Thr Pro Ser Asp Thr Gln Asn Asp Ile Gln  
 1365 1370 1375  
 Asn Asp Gly Ile Pro Ser Ser Lys Ile Thr Asp Asn Glu Trp Asn Thr  
 1380 1385 1390  
 Leu Lys Asp Glu Phe Ile Ser Gln Tyr Leu Gln Ser Glu Gln Pro Asn  
 1395 1400 1405



Asp Val Pro Asn Asp Tyr Ser Ser Gly Asp Ile Pro Leu Asn Thr Gln  
 1410 1415 1420  
 Pro Asn Thr Leu Tyr Phe Asp Asn Pro Asp Glu Lys Pro Phe Ile Thr  
 1425 1430 1435 1440  
 Ser Ile His Asp Arg Asp Leu Tyr Ser Gly Glu Glu Tyr Ser Tyr Asn  
 1445 1450 1455  
 Val Asn Met Val Asn Thr Asn Asn Asp Ile Pro Ile Ser Gly Lys Asn  
 1460 1465 1470  
 Gly Thr Tyr Ser Gly Ile Asp Leu Ile Asn Asp Ser Leu Asn Ser Asn  
 1475 1480 1485  
 Asn Val Asp Ile Tyr Asp Glu Val Leu Lys Arg Lys Glu Asn Glu Leu  
 1490 1495 1500  
 Phe Gly Thr Asn His Thr Lys Lys Asn Thr Ser Thr Asn Ser Val Ala  
 1505 1510 1515 1520  
 Lys Glu Leu Cys Gly Asp Pro Ile Met Asn Gln Leu Asp Leu Leu His  
 1525 1530 1535  
 Lys Trp Leu Asp Arg His Arg Asp Met Cys Glu Lys Trp Asn Asn Lys  
 1540 1545 1550  
 Glu Glu Val Leu Asp Lys Leu Lys Glu Glu Trp Asn Lys Asp Asn Asn  
 1555 1560 1565  
 Ser Gly Asn Ile Asn Pro Ser Gly Asn Ile Asn Pro Ser Gly Asn Thr  
 1570 1575 1580  
 Pro Pro Thr Ser Asp Ile Pro Ser Gly Lys Leu Ser Asp Thr Pro Ser  
 1585 1590 1595 1600  
 Asp Asn Asn Ile Pro Ser Ser Asn Lys Thr Leu Asn Thr Asp Val Ser  
 1605 1610 1615  
 Ile Gln Ile His Met Asp Asn Pro Lys Pro Ile Asn Gln Phe Thr Asn  
 1620 1625 1630  
 Met Asp Thr Ile Leu Glu Asp Leu Glu Lys Tyr Asn Glu Pro Tyr Tyr  
 1635 1640 1645  
 Asp Val Gln Asp Asp Ile Tyr Tyr Asp Val His Asp His Asp Val Ser  
 1650 1655 1660  
 Thr Ala Gly Ser Asn Ala Met Asp Val Pro Ser Lys Val Gln Ile Glu  
 1665 1670 1675 1680  
 Met Asp Ile Asn Thr Lys Leu Val Lys Glu Lys Tyr Pro Ile Ser Asp  
 1685 1690 1695  
 Val Trp Asp Ile  
 1700

<210> 2  
 <211> 334  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 2  
 Met Met Leu Asn Tyr Thr Asn Ile Leu Leu Phe Tyr Leu Ser Leu Asn  
 1 5 10 15  
 Ile Leu Ser Ser Ser Ser Glu Val Tyr Asn Gln Arg Asn His Tyr Ile  
 20 25 30

Thr Arg Thr Pro Lys Ala Thr Thr Arg Thr Leu Cys Glu Cys Glu Leu  
 35 40 45  
 Tyr Ala Pro Ser Asn Tyr Asp Asn Asp Pro Glu Met Gln Lys Val Met  
 50 55 60  
 Glu Asn Tyr Asn Arg Gln Thr Ser Gln Arg Phe Glu Glu Tyr Asn Glu  
 65 70 75 80  
 Arg Val Ile Lys Asn Arg Gln Lys Cys Lys Glu Gln Cys Asp Lys Glu  
 85 90 95  
 Ile Gln Lys Ile Ile Leu Lys Asp Lys Leu Glu Lys Glu Leu Met Asn  
 100 105 110  
 Lys Phe Ala Thr Leu Gln Thr Asp Ile Gln Ser Asp Ala Ile Pro Thr  
 115 120 125  
 Cys Val Cys Glu Lys Ser Val Ala Asp Lys Val Glu Lys Thr Cys Leu  
 130 135 140  
 Lys Cys Gly Gly Val Leu Gly Ser Gly Ile Ala Pro Ser Val Gly Leu  
 145 150 155 160  
 Leu Gly Thr Val Ala Ile Asp Gln Trp Thr Asn Ala Ala Leu Leu Asp  
 165 170 175  
 Ala Ala Gln Lys Gly Ile Gln Ala Gly Ile Asp Thr Val Val Ala Glu  
 180 185 190  
 Leu Glu Tyr Val Ala Glu Arg Phe Asp Asp Ile Gly Ile Asn Ile Val  
 195 200 205  
 Gly Met Ile Asn Lys Glu Thr Tyr Arg Cys Pro Gln Ala Leu Ile Glu  
 210 215 220  
 Ser Ile Tyr Ala Ala Lys Gln Lys Val Cys Asp Asn Val Gly Asn Pro  
 225 230 235 240  
 Ala Pro Thr Cys His Arg Val Gly Gln Asp Gly Thr Ser Ile Trp Phe  
 245 250 255  
 Arg Pro Glu Val Leu Lys Ala Thr Gln Asp Gly Ile Asp Ala Ala Glu  
 260 265 270  
 Thr Val Glu Lys Ala Glu Ile Val Leu Ile Asn Glu Glu Ser Ala His  
 275 280 285  
 Leu Tyr Ser Ala Ile Gly Tyr Ser Val Leu Ala Ile Leu Ile Ile Val  
 290 295 300  
 Leu Val Met Leu Ile Ile Tyr Leu Ile Leu Arg Tyr Arg Arg Lys Lys  
 305 310 315 320  
 Lys Met Lys Lys Lys Leu Gln Tyr Ile Lys Leu Leu Glu Glu  
 325 330

&lt;210&gt; 3

&lt;211&gt; 440

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 3

Met Lys Arg Lys Lys Lys Lys Lys Asn Ile His Val Tyr Thr Tyr Ile  
 1 5 10 15

Leu His Leu Tyr Ile Pro Ile Tyr Pro Tyr Met His Lys Pro Thr Cys  
 20 25 30

Ile Pro Thr Tyr Ile Tyr Thr Asn Thr Tyr Ile Leu Ile Phe Ile Tyr  
 35 40 45  
 Arg Lys Lys Pro Asn Ile Thr Ser Gly Arg Thr Asn Leu Phe Arg Val  
 50 55 60  
 Ile Asp Ile Pro Gln Asn Asp Tyr Asp Met Ser Thr Thr Lys Ser Ser  
 65 70 75 80  
 Asn Arg Tyr Val Pro Tyr Glu Ser His Lys Tyr Lys Gly Lys Thr Tyr  
 85 90 95  
 Ile Tyr Met Glu Gly Glu Glu Thr Asp Asp Tyr Ser Tyr Ile Arg Asp  
 100 105 110  
 Ile Ser Ser Ser Asp Ile Thr Ser Ser Ser Glu Ser Glu Tyr Glu Glu  
 115 120 125  
 Leu Asp Ile Asn Asp Ile Tyr Val Pro Ser Leu Ser Lys Tyr Lys Thr  
 130 135 140  
 Leu Ile Glu Leu Val Leu Glu Pro Ser Lys Arg Asp Thr Phe Asn Thr  
 145 150 155 160  
 Pro Ser Gly Asp Thr Phe Thr Asn Lys Phe Arg Asp Asp Glu Trp Asn  
 165 170 175  
 Gln Leu Lys Gln Asp Phe Ile Glu Gln Tyr Leu Gln Asn Ile Gln Lys  
 180 185 190  
 Asp Phe Ile Leu His Asp Ser Met Asp Glu Lys Pro Phe Ile Thr Gln  
 195 200 205  
 Ile Gln Asp Arg Phe Leu Asp Ser Ser His Glu Glu Val Ile Tyr Asn  
 210 215 220  
 Ile Asp Trp Asn Val Pro Glu Asn Ile Asn Arg Ile Asn Asn Ile Met  
 225 230 235 240  
 His Asp Thr Lys Tyr Cys Ser Asn Asn Leu Tyr Thr Gly Thr Asp Leu  
 245 250 255  
 Ile Asn Asp Ser Leu Asn Gly Asn Gln Tyr Ile Asp Ile Tyr Asp Glu  
 260 265 270  
 Met Leu Lys Arg Lys Glu Asn Glu Leu Phe Gly Thr Tyr His Thr Lys  
 275 280 285  
 Tyr Thr Thr Phe Asn Ser Val Ser Lys Gln Thr Pro Ser Asp Pro Ile  
 290 295 300  
 Ile Asn Gln Leu Tyr Leu Tyr His Lys Trp Ile Asp Lys His Arg Asp  
 305 310 315 320  
 Ile Cys Glu Gln Trp Lys Thr Lys Glu Asp Met Leu Tyr Lys Ser Asn  
 325 330 335  
 Glu Val Trp Asn Met Glu Arg Lys Glu Tyr Leu Leu Asp Ile Gln Pro  
 340 345 350  
 Ser Thr Leu Asp Asp Ile His Lys Ile Asn Asp Glu Thr Tyr Asn Ile  
 355 360 365  
 Ile Ser Thr Asn Asn Ile Tyr Asp His Pro Ser Gln Glu Thr Pro Leu  
 370 375 380  
 Gln Leu Leu Gly Ser Thr Asn Ile Ile Pro Ser Tyr Ile Thr Thr Glu  
 385 390 395 400  
 Gln Asn Asn Gly Leu Arg Thr Asn Ile Ser Met Tyr Thr Tyr Ile Asp

405 410 415  
 Glu Thr Asn Asn Asn Asn Val Val Ala Thr Ser Ile Ile Gly Asp Asp  
 420 425 430  
 Gln Met Glu Asn Ser Tyr Asn Cys  
 435 440  
  
 <210> 4  
 <211> 304  
 <212> PRT  
 <213> Plasmodium falciparum  
  
 <400> 4  
 Met Lys Met Tyr Tyr Leu Lys Met Leu Leu Phe Thr Phe Leu Ile Asn  
 1 5 10 15  
 Thr Leu Val Ala Arg His Tyr Glu Asn Phe Val Asn Asn His Tyr Asn  
 20 25 30  
 Val Ser Leu Ile Gln Asn Lys Thr Lys Arg Val Thr Ile Lys Ser Arg  
 35 40 45  
 Leu Leu Ala Gln Thr Gln Ile His Asn Pro His Tyr His Asn Asp Pro  
 50 55 60  
 Glu Leu Lys Glu Ile Ile Asp Lys Met Asn Glu Glu Ala Ile Lys Lys  
 65 70 75 80  
 Tyr Gln Gln Thr His Asp Pro Tyr Lys Gln Leu Lys Glu Val Val Glu  
 85 90 95  
 Lys Asn Gly Ser Gln Asn Arg Ser Gly His Val Ala Glu Pro Met Ser  
 100 105 110  
 Thr Leu Glu Lys Glu Leu Leu Glu Thr Tyr Val Glu Thr Phe Gly Glu  
 115 120 125  
 Glu Ser Asn Ile Met Leu Lys Ser Gly Arg Tyr Gln Asn Gly Asp Asp  
 130 135 140  
 Val Ser Asp Asp Ser Ser Ser Cys Asp Cys Thr Asp Ile Asn Asn Ala  
 145 150 155 160  
 Lys Leu Glu Lys Thr Lys Gly Arg Asp Lys Tyr Leu Lys His Leu Lys  
 165 170 175  
 Gly Arg Cys Thr Arg Gly Ile Tyr Phe Cys Ser Ala Gly Ser Ala Leu  
 180 185 190  
 Leu Thr Leu Ile Ala Leu Ile Ala Ala Lys Lys Ala Ala Leu Ser Ala  
 195 200 205  
 Val Ala Ser Tyr Ala Gly Phe Lys Asn Cys Met Ser Ser Ile Ala Thr  
 210 215 220  
 Phe Lys Leu Leu Asp Ser Ser Thr Leu Leu Ser Ser Phe Leu Ser Met  
 225 230 235 240  
 Lys Ala Cys Val Val Gly Ala Thr Asp Met Ala Gly Thr Ile Ala Thr  
 245 250 255  
 Pro Ala Met Ala Ala Phe Tyr Pro Tyr Gly Ile Ala Ala Leu Val Leu  
 260 265 270  
 Leu Ile Leu Ala Val Val Leu Ile Ile Leu Tyr Ile Trp Leu Tyr Arg  
 275 280 285  
 Arg Arg Lys His Ser Trp Lys His Glu Cys Lys Lys His Leu Cys Lys

290

295

300

<210> 5  
 <211> 370  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 5  
 Met Lys Val His Tyr Ile Asn Ile Leu Leu Phe Ala Leu Pro Leu Asn  
 1 5 10 15  
 Ile Leu Glu His Asn Lys Asn Glu Pro His Thr Thr Pro His His Pro  
 20 25 30  
 Pro Asn Thr Arg Leu Leu Cys Glu Cys Glu Leu Tyr Ser Pro Ala Asn  
 35 40 45  
 Tyr Asp Ser Asp Pro Glu Met Lys Arg Val Met Gln Gln Phe Val Asp  
 50 55 60  
 Arg Thr Thr Gln Arg Phe His Glu Tyr Asp Glu Arg Met Lys Thr Thr  
 65 70 75 80  
 Arg Gln Lys Cys Lys Asp Lys Cys Asp Lys Glu Ile Gln Asn Ile Ile  
 85 90 95  
 Leu Lys Asp Lys Leu Glu Lys Gln Met Glu Gln Gln Leu Thr Thr Leu  
 100 105 110  
 Glu Thr Lys Ile Asp Thr Asn Asp Ile Pro Thr Cys Val Cys Glu Lys  
 115 120 125  
 Ser Leu Ala Asp Lys Thr Glu Lys Phe Cys Leu Asn Cys Gly Val Gln  
 130 135 140  
 Leu Gly Gly Gly Val Leu Gln Ala Ser Gly Leu Leu Gly Gly Ile Gly  
 145 150 155 160  
 Gln Leu Gly Leu Asp Ala Trp Lys Ala Ala Ala Leu Val Thr Ala Lys  
 165 170 175  
 Glu Leu Ala Glu Lys Ala Gly Ala Ala Lys Gly Leu Ala Glu Gly Asn  
 180 185 190  
 Ala His Gly Met Lys Ile Val Ile His His Leu Lys Glu Leu His Ile  
 195 200 205  
 Asp Lys Leu Val Pro Gly Ile Cys Glu Lys Ile Ser Ser Thr Gly His  
 210 215 220  
 Tyr Ala Asn Ile Thr Asn Phe Ala Asn Thr Ile Ile Gln Gln Arg Gly  
 225 230 235 240  
 Thr Met Cys Gly Ala Ser Gly Lys Asn Leu Gly Lys Asp Met Cys Thr  
 245 250 255  
 Lys Ile Ser Ile Lys Leu Gly Thr Leu Lys Pro Asp Gly Ile Arg Pro  
 260 265 270  
 Gly Leu Pro Asp Lys Asp Ala Val Thr Lys Val Leu Asn Gly Leu Val  
 275 280 285  
 Glu Gln Ala Asp Lys Ala Ala Ala His Val Thr Lys Thr Thr Ser Glu  
 290 295 300  
 Ser Val Thr Ala Ala Ile Lys Ala Arg Glu Thr Ala Leu Ile Glu Gly

10

<400> 7	Met 1	Lys	Asp	His	Tyr 5	Ile	Asn	Ile	Leu	Leu 10	Phe	Ala	Leu	Pro	Leu 15	Asn
Ile	Leu	Val	Tyr 20	Asn	Gln	Arg	Ser	Tyr 25	Tyr	Ile	Thr	Pro	Arg 30	His	Thr	
Glu	Thr	Asn 35	Arg	Ser	Leu	Cys	Glu 40	Cys	Glu	Leu	Tyr	Ser 45	Pro	Thr	Asn	
Tyr	Asp 50	Ser	Asp	Pro	Glu	Met 55	Lys	Arg	Val	Met	Gln 60	Gln	Phe	Glu	Asp	
Arg 65	Thr	Ser	Gln	Arg	Phe 70	His	Glu	Tyr	Glu	Glu 75	Arg	Met	Gln	Ser	Lys 80	
Arg	Met	Gln	Cys	Lys 85	Glu	Gln	Cys	Asp	Lys 90	Glu	Ile	Gln	Lys	Ile 95	Ile	
Leu	Lys	Asp	Lys 100	Leu	Glu	Lys	Glu	Leu 105	Met	Asp	Lys	Phe	Asp 110	Thr	Leu	
His	Thr	Asp 115	Ile	Gln	Ser	Asp	Ala 120	Ile	Pro	Thr	Cys	Val 125	Cys	Glu	Lys	
Ser	Leu 130	Ala	Asp	Lys	Val	Glu 135	Lys	Gly	Cys	Leu	Arg 140	Cys	Gly	Tyr	Gly	
Leu 145	Gly	Thr	Val	Ala	Pro 150	Thr	Val	Gly	Leu	Ile 155	Gly	Ala	Ile	Ala	Val 160	
Asn	Glu	Trp	Thr	Lys 165	Ala	Ala	Thr	Ala	Ala 170	Ala	Thr	Gln	Lys	Gly 175	Ile	
Glu	Ala	Gly	Ile 180	Asn	Val	Val	Ile	Asp 185	Thr	Leu	Lys	Arg	Leu 190	Phe	Asn	
Ile	Glu	Val 195	Val	Thr	Asp	Leu	Lys 200	Trp	Lys	Thr	Leu	Ile 205	Thr	Ala	Gln	
Asn	Tyr	Thr	Asp	Lys	Ile	Leu	Val	Gly	Asp	Val	Ile	Arg	Lys	Leu	Gly	

```
<210> 8
<211> 248
<212> PRT
<213> Plasmodium falciparum
```

<400>	8															
Met	Lys	Arg	Lys	Lys	Lys	Lys	Lys	Asn	Ile	His	Val	Tyr	Thr	Tyr	Ile	
1				5					10					15		
Leu	His	Leu	Tyr	Ile	Pro	Ile	Tyr	Pro	Tyr	Met	His	Lys	Pro	Thr	Cys	
			20					25					30			
Ile	His	Thr	Tyr	Ile	Tyr	Thr	Asn	Thr	Tyr	Ile	Leu	Ile	Phe	Ile	Tyr	
		35					40					45				
Arg	Lys	Lys	Pro	Asn	Ile	Thr	Ser	Gly	Arg	Thr	Asn	Leu	Phe	Arg	Val	
	50					55					60					
Ile	Asp	Ile	Pro	Gln	Asn	Asp	Tyr	Asp	Ile	Pro	Thr	Thr	Lys	Ser	Ser	
65					70					75					80	
Asn	Arg	Tyr	Val	Pro	Tyr	Glu	Ser	Asp	Arg	Tyr	Val	Gly	Lys	Thr	Tyr	
				85					90					95		
Ile	Tyr	Val	Glu	Gly	Glu	Glu	Thr	Asp	Asp	Tyr	Ser	Tyr	Ile	Arg	Asp	
			100					105					110			
Ile	Tyr	Ser	Ser	Asp	Ile	Thr	Ser	Ser	Ser	Glu	Ser	Glu	Tyr	Glu	Glu	
		115					120					125				
Ile	Asp	Leu	Asn	Asp	Ile	Tyr	Val	Ser	Gly	Ser	Pro	Lys	Tyr	Lys	Met	
	130					135					140					
Phe	Ile	Glu	Val	Val	Leu	Glu	Pro	Leu	Asn	Arg	Asp	Thr	Phe	Asn	Leu	
145					150					155					160	
Ser	Ser	Gly	Asn	Thr	Ser	Thr	Asn	Lys	Leu	Thr	Asp	Asn	Glu	Trp	Asn	
				165					170					175		
Gln	Trp	Lys	Gln	Asp	Phe	Ile	Glu	Gln	Tyr	Leu	Thr	His	Ile	Gly	Ser	
			180					185					190			
Ala	Val	Pro	Leu	Tyr	Met	Ser	Tyr	Lys	Leu	Ile	Ile	Cys	Ile	Cys	Ile	
		195					200					205				
Pro	Lys	Leu	Ile	Phe	Tyr	Met	Leu	Leu	Trp	Met	Lys	Asn	Leu	Leu	Leu	



210 215 220  
 His Gln Tyr Lys Ile Asp Phe Leu Val Val Val Ile Asn Lys Leu Leu  
 225 230 235 240  
 Ile Ile Leu Ile Gly Ile Phe Glu  
 245

<210> 9  
 <211> 172  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 9  
 Met Asn Glu Glu Ala Ile Lys Lys Tyr Gln Gln Thr His Asp Pro Tyr  
 1 5 10 15  
 Glu Gln Leu Lys Asp Val Val Glu Lys Asn Gly Arg Lys Tyr Thr Ser  
 20 25 30  
 Gly Asn Gly Ala Glu Pro Met Ser Thr Ile Glu Lys Asp Leu Leu Glu  
 35 40 45  
 Thr Tyr Glu Glu Met Phe Gly Asp Glu Ser Asn Thr Leu Lys Ser Gly  
 50 55 60  
 Met Ser Pro Asn Val Asp Glu Lys Ser Ser Ala Cys Glu Cys Ala Asp  
 65 70 75 80  
 Ile Asn Asn Ile Lys Leu Gly Lys Thr Lys Gly Arg Asp Lys Tyr Leu  
 85 90 95  
 Lys His Leu Lys Gly Arg Cys Thr Arg Gly Ile Tyr Ile Ser Ser Leu  
 100 105 110  
 Thr Thr Val Ile Leu Thr Thr Ile Ala Leu Tyr Ala Ala Arg Ala Ala  
 115 120 125  
 Ala Ile Ala Thr Phe Arg Glu Pro Tyr Ser Ala Cys Ala Ala Phe Val  
 130 135 140  
 Ser Ile Phe Asn Met Leu Ser Arg Glu Thr Val Ile Glu Leu Phe Lys  
 145 150 155 160  
 Gln Ala Leu Glu Tyr Val His Leu Val Leu Leu Ile  
 165 170

<210> 10  
 <211> 312  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 10  
 Met Lys Leu Asn Tyr Thr Lys Ile Leu Leu Phe Phe Phe Pro Leu Asn  
 1 5 10 15  
 Ile Leu Ala Asn Asn Asn Lys Asn Lys Pro Ser Ile Thr Gln Arg His  
 20 25 30  
 Thr Pro Arg Tyr Thr Ser Arg Val Leu Ser Glu Cys Asp Ile Arg Ser  
 35 40 45  
 Ser Ile Tyr Asp Asn Asp Ala Glu Met Lys Ser Val Lys Glu Thr Phe  
 50 55 60  
 Asp Arg Gln Thr Ser Gln Arg Phe Glu Glu Tyr Glu Glu Arg Met Lys  
 65 70 75 80

```
<210> 11
<211> 356
<212> PRT
<213> Plasmodium falciparum
```

Met 1	Lys	Val	His	Tyr 5	Ile	Asn	Ile	Leu	Leu 10	Phe	Thr	Leu	Pro	Leu 15	Asn
Ile	Leu	Val	Asn 20	Gly	Gln	Gly	His	Tyr 25	Ser	Ser	Thr	Lys	His 30	Pro	Ile
Ser	Ser	Thr 35	Lys	Ser	Ser	Lys	Tyr 40	His	Arg	Ser	Leu	Cys 45	Glu	Cys	Glu
Ile	Tyr 50	Thr	Ser	Ile	Tyr	Asp 55	Asn	Asp	Pro	Glu	Met 60	Lys	Lys	Val	Met
Gln 65	Asp	Phe	Asp	Gln	Gln 70	Thr	Ser	Gln	Arg	Leu 75	Arg	Glu	Tyr	Asp	Glu 80
Arg	Leu	Ile	Lys	Asn 85	Arg	Gln	Lys	Cys	Lys 90	Asp	Gln	Cys	Asp	Lys 95	Asp

Ile Gln Lys Ile Ile Leu Lys Asp Lys Ile Glu Lys Glu Leu Thr Lys  
 100 105 110  
 Gln Leu Glu Ala Leu Glu Val Asp Ile Thr Thr Glu Asp Ile Pro Ala  
 115 120 125  
 Cys Val Cys Lys Lys Ser Val Glu Asp Lys Val Gly Lys Asn Cys Leu  
 130 135 140  
 Lys Cys Gly Gly Ile Leu Gly Gly Gly Ile Pro Gly Leu Gly Val Leu  
 145 150 155 160  
 Gly Ala Tyr Ala Val Asn Ser Met Val Gln Val Ala Met Asp Ala Ala  
 165 170 175  
 Lys Lys Ala Ala Ile Ala Glu Gly Ala Glu Ala Gly Ile Ala Glu Gly  
 180 185 190  
 Ile Lys Val Ala Ile Gln Gly Val Pro Lys Lys Phe Leu Leu Tyr Thr  
 195 200 205  
 Leu Asn Gly Lys Glu Leu Gln Ala Val Ile Asn Ala Asn Asn Phe Gln  
 210 215 220  
 Asn Pro Ser Phe Phe Tyr Gly Glu Ile Met Ala Glu Tyr Val Ser Trp  
 225 230 235 240  
 Lys Lys Ser Asp Met Val Asn Ser Tyr Gly Leu Phe Ser Phe Ile Glu  
 245 250 255  
 Glu Ser Cys Glu Asn Asn Pro Asp Lys Ile Met Lys Phe Ile Leu Ala  
 260 265 270  
 Asn Ser Asn Asp Ile Ala Lys Asp Ala Gly Lys Ala Ala Thr Lys Met  
 275 280 285  
 Thr Thr Gln Thr Thr Glu Ala Leu Thr Leu Lys Lys Thr Ala Glu Ala  
 290 295 300  
 Thr Ser Thr Ser Ala Ile Phe Ser Asn Pro Ile Val Ile Ser Phe Ile  
 305 310 315 320  
 Val Leu Val Ile Ile Val Leu Ile Leu Leu Ile Ile Tyr Leu Ile Leu  
 325 330 335  
 Arg Tyr Arg Arg Lys Arg Lys Met Lys Lys Lys Leu Gln Tyr Leu Lys  
 340 345 350  
 Leu Leu Lys Glu  
 355

<210> 12  
 <211> 290  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 12  
 Met Lys Met Tyr Tyr Leu Lys Met Leu Leu Phe Thr Phe Leu Ile Asn  
 1 5 10 15  
 Thr Leu Val Leu Ile Gln Asn Asn Thr Gln Arg Thr Thr Ile Asn Ser  
 20 25 30  
 Arg Leu Leu Ala Gln Thr Gln Asn Lys Asn Pro His Tyr His Asn Asp  
 35 40 45  
 Pro Glu Leu Lys Glu Ile Ile Asp Lys Leu Asn Glu Glu Ala Ile Lys  
 50 55 60

Lys Tyr Gln Gln Thr His Asp Pro Tyr Glu Gln Leu Lys Asp Val Val  
 65 70 75 80  
 Glu Lys Asn Gly Thr Lys His Val Gly Gly His Val Ser Glu Pro Met  
 85 90 95  
 Ser Thr Ile Glu Lys Glu Leu Leu Glu Thr Tyr Glu Asp Val Phe Gly  
 100 105 110  
 Asp Lys Asn His Val Met Leu Lys Ser Gly Arg Tyr Pro Asn Asp Asp  
 115 120 125  
 Asp Lys Ser Asp Asp Ser Ser Ser Cys Glu Cys Thr Asp Val Asn Asn  
 130 135 140  
 Thr Lys Leu Glu Lys Thr Lys Gly Lys Asp Lys Tyr Leu Lys His Leu  
 145 150 155 160  
 Lys His Arg Cys Ile Gly Gly Ile Cys Ser Cys Ser Val Gly Ser Ala  
 165 170 175  
 Phe Leu Thr Ile Leu Gly Cys Ala Phe Ala Lys Ser Ala Ala Leu Thr  
 180 185 190  
 Ala Phe Ala Ser Ser Glu Ser Thr Lys Thr Cys Ile Ser Ser Val Ala  
 195 200 205  
 Ile Tyr Asn Leu Phe Gln Asn Ser Thr Met Leu Ser Ala Leu Lys Thr  
 210 215 220  
 Val Gly Gly Thr Cys Ala Asn Gly Ala Pro Asp Ile Ala Gly Thr Val  
 225 230 235 240  
 Ser Thr Leu Ala Ser Ala Ala Phe Pro Pro Tyr Gly Ile Ala Ala Leu  
 245 250 255  
 Val Leu Leu Ile Leu Ala Val Ala Leu Ile Ile Leu Tyr Ile Trp Leu  
 260 265 270  
 Tyr Arg Arg Arg Lys Asn Ser Trp Lys His Glu Cys Lys Lys His Leu  
 275 280 285  
 Cys Arg  
 290

<210> 13  
 <211> 156  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 13  
 Met Ser Cys Asn Tyr Ile Lys Leu Ser Leu Phe Ser Ile Val Leu Cys  
 1 5 10 15  
 Ile Phe Ile Ile Thr His Lys Leu Cys Leu Glu Lys Ile Pro His Asn  
 20 25 30  
 Lys Arg Asn Thr Val Asp Ile Leu Asn Ala Arg His Lys Arg Leu Leu  
 35 40 45  
 Ser Glu Ser Glu Asp Glu Tyr Ile Phe Lys Thr His Ser Gly Glu Asn  
 50 55 60  
 Ser Ser Thr Gln Pro Ile Asp Asn Lys Ser His Glu Asn Ile Thr Glu  
 65 70 75 80  
 Tyr His Lys Thr Ser Ser Ser Phe Arg Leu Asn Glu Glu Tyr Pro Gln  
 85 90 95

Asn His Asn Tyr Glu Ser Glu Gln Ile Lys Trp Glu Asn Glu Lys Asn  
 100 105 110  
 Asn Lys Leu Leu Leu Gln Lys Leu Arg Lys Lys Ser His Tyr Arg Asn  
 115 120 125  
 Ile Lys Ile Ile Phe Ile Thr Ala Leu Ser Met Met Glu Phe Pro Val  
 130 135 140  
 Leu Pro Met Leu Tyr Ile Lys Tyr Tyr Ile His Lys  
 145 150 155

<210> 14  
 <211> 254  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 14  
 Met Arg Ser Leu Lys Ser Cys Phe Phe Lys His Asn Trp Asn Ile Cys  
 1 5 10 15  
 Leu Leu Trp Ile Arg Val Ile Leu Ser Ser Ser Leu Leu Ile Ser Leu  
 20 25 30  
 Ile Phe Tyr Asn Asn Val Phe Asn Cys Lys Ile Lys Tyr Gly Lys Ser  
 35 40 45  
 His Thr Glu Asp Ser Phe Asn Leu Ile Lys Leu Arg Ser Leu Ser Glu  
 50 55 60  
 Tyr Asn Lys Asn Tyr Asp Gly Glu Tyr Tyr Asp Ile Leu Lys Leu Asn  
 65 70 75 80  
 Ile Asp Asn Asp Lys Leu Lys Gln Cys Ala Met Arg Ile His Pro Glu  
 85 90 95  
 Val Glu Leu Ile Gly Lys Glu Ser Glu Cys Phe Gly Glu Asn Met Asn  
 100 105 110  
 Glu Val Tyr Ile Lys Leu Ile Thr Asp Leu Lys Pro Asp Leu Ile Asn  
 115 120 125  
 Val Asn Ala Thr Ser Lys Lys Glu Leu Leu Asn Glu Trp Asp Phe Ile  
 130 135 140  
 Met Asn Asn Phe Asn Gly Lys Asn Val Glu Lys Ile Val Glu Ile Lys  
 145 150 155 160  
 Asp Glu Thr Asn Asp Glu Thr Asp Asn Glu Thr Asn Asp Glu Thr Asp  
 165 170 175  
 Asn Glu Thr Asn Asp Glu Lys Ser Ile Lys Lys Lys Lys Lys Lys Arg  
 180 185 190  
 Lys Gly Lys Pro Arg Ile Arg Tyr Ile Ala Glu Met Val Gly Tyr Gly  
 195 200 205  
 Thr Ile Cys Ile Ala Gly Ala Pro Val Ile Leu Thr Leu Ile Ile Val  
 210 215 220  
 Gly Gly Phe Ile Trp Gly Val Lys Gly Thr Lys Tyr Ala Arg Lys Tyr  
 225 230 235 240  
 Phe Asn Ile Ile Lys Lys Leu Leu Phe Thr Lys Val Pro Phe  
 245 250

<210> 15  
 <211> 369

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 15

Met Asp Thr Lys Asn Met Leu Thr Lys Lys Met Lys Ile Glu Lys Ser  
 1 5 10 15

Ala Phe Asn Lys Tyr Ser His Leu Phe Thr Ser Leu Phe Asn Tyr Asp  
 20 25 30

Leu Trp Glu Arg Phe Glu Ile Ser Tyr Tyr Met Leu Ser Gly Asn Ser  
 35 40 45

Glu Tyr Thr Asn Asp Leu Asp Leu Glu Ile Asn Lys Lys Leu Val Leu  
 50 55 60

Leu Asn Asn Glu Thr Asn Ser Glu Leu Arg Ile His Thr Ile Trp His  
 65 70 75 80

Asn Val Met Lys Ser Glu Lys Glu Lys Phe Asn Ser Trp Tyr Met Tyr  
 85 90 95

Phe Asn Asn Asn Phe Tyr Leu Leu Arg Lys Lys Tyr Lys Thr Pro Phe  
 100 105 110

Asn Tyr Ala Lys Pro Thr Cys Asn Gln Cys Asn Glu Phe Phe Ala Leu  
 115 120 125

Ser Lys Lys Tyr Ile Glu Asn Ser Phe Asn Lys Val Phe Asn Lys Trp  
 130 135 140

Phe Lys Asn Asn Val Tyr Leu Asp Val Asn Glu Phe Arg Val Ile Val  
 145 150 155 160

Met Ala Cys Arg Leu Leu Trp Arg Lys Thr Leu Ala Thr Leu Lys Glu  
 165 170 175

Glu Gly Met Leu Tyr Leu Gln Lys Pro Phe Glu Ala Leu His His Glu  
 180 185 190

Arg Lys Lys Ile His Lys Arg Gly Gly Arg Ala Leu Lys Phe Lys Ala  
 195 200 205

Glu Glu Phe Tyr Glu Lys Asn Pro Asp Leu Val Thr Tyr Lys Gly Cys  
 210 215 220

His Phe Leu Asn Ser Leu Lys Asn Val Asn Leu Glu Glu Lys Tyr Asp  
 225 230 235 240

Asp Asp Asp Glu Ala Glu Asn Glu Lys Lys Lys Gln Glu Lys Ile Lys  
 245 250 255

Asp Asn Lys Lys Glu Glu Glu Asp Ala Tyr Glu Asp Asn Glu Asp Asn  
 260 265 270

Glu Asp Tyr Asp Asp Tyr Asp Asp Tyr Asp Asp Tyr Asp Glu Glu Gln  
 275 280 285

Tyr Asp Lys Asn Gly Glu Val Ile Val Gly Ala Asn Glu Asp Pro Ser  
 290 295 300

Tyr Glu Tyr Asn Tyr His Tyr Glu Glu Pro Phe Ile Leu Thr Pro Glu  
 305 310 315 320

Leu Ile Glu Ala Ile Glu Arg Ala Val Glu Arg Asp Val Glu Arg Glu  
 325 330 335

Val Glu Lys Arg Ser Glu Lys Leu Ile Asp Asp Lys Trp Lys Lys Arg  
 340 345 350

Leu Ala Lys Glu Ile Arg Asp Lys Pro Ile Lys Lys Val Arg Phe Asn  
 355 360 365

Leu

<210> 16

<211> 900

<212> PRT

<213> Plasmodium falciparum

<400> 16

Met Lys Cys Lys Arg Asn Val Phe Phe Ser Lys Ser Leu Lys Phe Gly  
 1 5 10 15  
 His Ile Ser Val Phe Ile Phe Gly Ile Leu Tyr Gly Val Ile Asn Lys  
 20 25 30  
 Leu Phe Ile Ser Asp Val Asn Ser Cys Tyr Ser Val Ser Asn Ser Ile  
 35 40 45  
 Ile Tyr Glu Arg Gln Leu Ser Glu Lys Asp Asn Leu Ser Asn Ser Leu  
 50 55 60  
 Glu Gln Asn Gly Glu Pro Val Val Ile Gly Gln Phe Phe Ser Leu Pro  
 65 70 75 80  
 Asn Gly Lys Ser Ile Ser Ile Ser Asp Asp Ile Phe Ile Asp Glu Glu  
 85 90 95  
 Gln Ser Ile Val Asn Phe Ile Asp Asn Ile Ile Glu Gly Leu Glu Gln  
 100 105 110  
 Tyr Met Leu Trp Asn Asn Tyr Met Val Ile Pro His Met Lys Gln Tyr  
 115 120 125  
 Pro Pro Val Phe Asn Asn Asp Lys Asp Ile Glu Leu Asn Asn Lys Val  
 130 135 140  
 Asp Asn Leu Glu Arg Asn Arg Glu Asp Ile Ile Ile Glu Thr Glu Lys  
 145 150 155 160  
 Leu Trp Leu Glu Ile Met Lys Asn Glu Lys Asn Lys Phe Ala Ser Leu  
 165 170 175  
 Lys Cys Lys Leu Phe Asn Gln Tyr Asn Lys Phe Lys Asn Lys His Asn  
 180 185 190  
 Ile Pro Lys Glu Gln Tyr Glu Lys Gly Cys Asn Leu Cys Lys Lys Leu  
 195 200 205  
 Ile Glu Ile Gly Glu Lys Tyr Leu Glu Leu Lys Leu Asn Ser Val Phe  
 210 215 220  
 Tyr Glu Trp Tyr Asp Lys Lys Val Ile Cys Val Glu Asp Phe Lys Arg  
 225 230 235 240  
 Lys Ile Glu Arg Cys Arg Ile Ala Trp Lys Ala Leu Ser Asn Lys Ile  
 245 250 255  
 Gln Tyr Leu Cys Asn Lys Ile Ile Ile Asn Cys Leu Asp Lys Ile Lys  
 260 265 270  
 Tyr Met Asn Glu Met Lys Ile Met Lys Ala Lys Lys Lys Ala Val Lys  
 275 280 285  
 Val Val Glu Lys Pro Glu Pro Lys Lys Lys Gln Glu Glu Asn Leu Ser  
 290 295 300

Met	Val	Glu	Gly	Leu	Asn	Cys	Phe	Glu	Glu	Asn	His	Lys	Ile	Ile	Cys	
305					310					315					320	
Ile	Lys	Asn	Asn	Asp	Leu	Ile	Ser	Gly	Cys	Glu	Asn	Val	Asp	Thr	Gln	
				325					330					335		
Gly	Cys	Pro	Ser	Val	Asn	Glu	Ile	Ile	Asn	Ser	Ser	Ser	Ile	Asn	Tyr	
			340					345					350			
Tyr	Glu	Lys	Met	Arg	Asp	Gly	Leu	Tyr	His	Asp	Asp	Glu	Glu	Tyr	Asp	
	355						360					365				
Ala	Leu	Val	Thr	Asp	Asp	Asp	Leu	Ile	Phe	Glu	Met	Phe	Asp	Glu	Asn	
	370					375					380					
Lys	Glu	Asp	Asp	Ile	Ile	Glu	Glu	Ser	Glu	Asn	Asn	Glu	Ser	Asp	Glu	
385					390					395					400	
Asp	Asp	Leu	Leu	Val	Glu	Glu	Ser	Glu	Ser	Asn	Glu	Ser	Asp	Glu	Asp	
				405					410					415		
Asp	Leu	Leu	Val	Glu	Glu	Tyr	Glu	Asn	Asn	Glu	Ser	Asp	Glu	Asp	Glu	
			420					425					430			
Ser	Ile	Ile	Glu	Glu	Tyr	Gly	Glu	Ala	Gln	Glu	Glu	Val	Ala	Ile	Ser	
		435					440					445				
Ser	Ser	Glu	Val	Val	Asp	Asp	Glu	Phe	Thr	Thr	Asn	Glu	Asp	Ile	Glu	
	450					455					460					
Ser	Glu	Glu	Arg	Tyr	Ser	Leu	Asp	Lys	Glu	Ala	Asn	Arg	Leu	Leu	Phe	
465					470					475					480	
Lys	Asn	Asp	Ile	Tyr	Asn	Ile	Trp	Phe	Ser	Asp	Leu	Ser	Asn	Ile	Tyr	
				485					490					495		
Val	Asp	Thr	Thr	Tyr	Tyr	Asp	Ile	Leu	Asn	Val	Tyr	Pro	Thr	Ser	Glu	
			500					505					510			
Leu	Ser	Glu	Ile	Lys	Ser	Asn	Tyr	Tyr	Asn	Leu	Ala	Leu	Lys	Tyr	Asn	
		515					520					525				
Pro	Glu	Ser	Asn	Leu	Gly	Asn	Ala	Glu	Ala	Leu	Thr	Lys	Phe	Arg	Asp	
	530					535					540					
Ile	Asn	Glu	Ala	Tyr	Gln	Ile	Leu	Ser	Leu	Asp	Gln	Arg	Arg	Met	Asn	
545					550					555					560	
Tyr	Asn	Lys	Tyr	Gly	Leu	Asn	Ala	Thr	Lys	Asp	Met	Phe	Leu	Ile	Asp	
				565					570					575		
Pro	Ser	Ile	Phe	Tyr	Val	Lys	Met	Leu	Ser	Ile	Glu	Lys	Phe	Tyr	Asp	
			580					585					590			
Tyr	Ile	Gly	Thr	Thr	Gln	Ile	Glu	Ser	Phe	Leu	Lys	Val	Leu	Ser	Glu	
		595					600					605				
Lys	Asn	Ile	Ala	Leu	His	Glu	Leu	Glu	His	Arg	Leu	Glu	Asp	Ile	Met	
	610					615					620					
Asn	Leu	Met	Tyr	Glu	Gln	Gln	Glu	Val	Arg	Gln	Val	Lys	Ile	Ala	Leu	
625					630					635					640	
Tyr	Leu	Arg	Asn	Lys	Leu	Gln	Pro	Tyr	Val	Asp	Gly	Asp	Asp	Gln	Trp	
				645					650					655		
Lys	Lys	His	Met	Glu	Glu	Glu	Val	Lys	Lys	Leu	Asn	Lys	Ser	Ile	Phe	
			660					665					670			
Gly	Thr	Phe	Phe	Leu	Lys	Ser	Ile	Gly	Trp	Ile	Tyr	Thr	Asn	Leu	Thr	



675					680					685					
Gln	Cys	Tyr	Arg	Glu	Asp	Asn	Gly	His	Ser	Phe	Gly	Val	Asn	Leu	Lys
690						695					700				
Leu	Ala	Asn	Met	Glu	Phe	Glu	Asn	Arg	Asn	Lys	Lys	Asn	Gln	Leu	Lys
705					710					715					720
Val	Ser	Lys	Ser	Met	Arg	Asn	Leu	Leu	Ser	Ile	Ile	Lys	Glu	Tyr	Ile
				725					730					735	
Pro	Arg	Asn	Glu	Asn	Ile	Thr	Gly	Leu	Val	Lys	Lys	Ile	Glu	Tyr	Leu
			740				745						750		
Lys	Ser	Glu	Asn	Asp	Ile	Glu	Asn	Asn	Ile	Ser	Asn	Val	Asn	Glu	Lys
		755					760					765			
Ser	Ser	Ser	Asn	Asp	Asn	Ser	Ser	Asp	Asp	Glu	Asn	Gln	Asn	Glu	Asn
	770					775					780				
Glu	Asn	Glu	Asn	Gln	Asn	Glu	Asn	Glu	Asn	Glu	Asn	Glu	Asn	Arg	Lys
785						790					795				800
Asp	Leu	Lys	Leu	Leu	Ser	Asp	Asn	Glu	Lys	Arg	Lys	Val	Leu	His	Phe
				805					810					815	
Met	Ile	Lys	Asn	Ile	Lys	Asn	Val	Val	Gln	Gly	Asp	Ile	Glu	Leu	Thr
			820						825				830		
Ile	Arg	Tyr	Ala	Ala	Glu	Lys	Val	Leu	Phe	Asp	Glu	Gly	Val	Asp	Lys
		835					840					845			
Glu	Thr	Gln	Leu	Lys	Arg	Val	Glu	Ala	Leu	Glu	Ile	Leu	Gly	Asn	Ile
	850					855					860				
Met	Lys	Thr	Cys	Ser	Lys	Glu	Asn	Lys	Asn	Trp	Glu	Lys	Asp	Gln	Glu
865						870					875				880
Ala	Asp	Ile	Glu	Asn	Ile	Ile	Glu	Lys	Val	Ile	Asn	Val	Ser	Lys	Met
				885					890					895	
Val	Asn	Asn	Glu												
			900												

<210> 17  
 <211> 354  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 17  
 Met Leu Ile Cys Ile Val Tyr Tyr Asn Phe Arg Lys Ser Ser Lys Ile  
 1 5 10 15  
 Lys Phe Arg Arg Asp Tyr Tyr Ser Ile Leu Gly Val Ser Arg Asp Cys  
 20 25 30  
 Thr Asn Glu Asp Ile Lys Lys Ala Tyr Lys Lys Leu Ala Met Lys Trp  
 35 40 45  
 His Pro Asp Lys His Leu Asn Ala Ala Ser Lys Lys Glu Ala Asp Asn  
 50 55 60  
 Met Phe Lys Ser Ile Ser Glu Ala Tyr Glu Val Leu Ser Asp Glu Glu  
 65 70 75 80  
 Lys Arg Asp Ile Tyr Asp Lys Tyr Gly Glu Glu Gly Leu Asp Lys Tyr  
 85 90 95  
 Gly Ser Asn Asn Gly His Ser Lys Gly Phe Lys Arg Thr Asp Pro Asn

100 105 110  
 Asp Val Phe Ser Lys Phe Phe Lys Thr Glu Thr Lys Phe Tyr Ser Asn  
 115 120 125  
 Ser Pro Ser Ser Pro Asn Gly Asn Val Leu Phe Glu Gly Ser Leu Phe  
 130 135 140  
 Gly Gly Ser Ser Pro Phe Ser Gly Ile Asn Pro Arg Ser Gly Ser Gly  
 145 150 155 160  
 Tyr Thr Thr Ser Lys Ser Phe Ser Ser Met Asp Lys Val Glu Glu Tyr  
 165 170 175  
 Val Val Pro Leu Tyr Val Thr Leu Glu Asp Leu Tyr Asn Gly Thr Gln  
 180 185 190  
 Lys Lys Leu Lys Val Thr Arg Lys Arg Cys Gln Gly Val Thr Thr Tyr  
 195 200 205  
 Asp Asp Glu Phe Phe Val Thr Val Asp Ile Lys Ser Gly Trp Cys Asp  
 210 215 220  
 Gly Thr Thr Ile Thr Tyr Lys Gly Glu Gly Asp Gln Thr Ser Pro Met  
 225 230 235 240  
 Ser Asn Pro Gly Asp Leu Val Phe Thr Ile Lys Thr Val Asp His Asp  
 245 250 255  
 Arg Phe Val Arg Ser Tyr Asn Asp Leu Ile Tyr Arg Cys Pro Ile Thr  
 260 265 270  
 Leu Glu Gln Ala Leu Thr Gly His Lys Phe Thr Ile Ile Thr Leu Asp  
 275 280 285  
 Asn Arg Asp Ile Asp Ile Gln Val Asp Glu Ile Val Thr Pro Leu Thr  
 290 295 300  
 Thr Arg Val Ile Thr Ser Glu Gly Met Pro Tyr Met Glu Asn Pro Lys  
 305 310 315 320  
 Met Lys Gly Asn Leu Ile Ile Glu Phe Asp Ile Ile Phe Pro Lys Lys  
 325 330 335  
 Leu Ser Asp Glu Gln Lys Glu Leu Ile Lys Glu Ala Leu Gly Gly Asn  
 340 345 350  
 Gly Phe

<210> 18  
 <211> 2441  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 18  
 Met Ala Thr Ile Lys Lys Tyr His Ile Arg Gly Arg Lys Asn Ile Leu  
 1 5 10 15  
 Ile Phe Leu Leu Lys Ile Phe Leu Phe Ser Pro Leu Ile Trp Ile Leu  
 20 25 30  
 Ile Tyr Ser Glu Tyr Phe Thr Val Lys Asn Tyr Asn Lys Ile Asp  
 35 40 45  
 Asn Val Tyr Asn Ile Phe Glu Ile Arg Leu Lys Arg Ser Leu Ala Gln  
 50 55 60  
 Val Leu Gly Asn Thr Arg Leu Ser Ser Arg Gly Val Arg Asp Pro Arg

65					70					75					80				
Thr	Lys	Glu	Ala	Leu	Lys	Glu	Lys	Gln	Phe	Arg	Asp	His	Lys	Arg	Lys				
				85					90					95					
Glu	Ala	Leu	Lys	Gln	Lys	Thr	Glu	Lys	Asn	Glu	Lys	Ala	Arg	Asn	Ala				
			100					105					110						
Leu	Lys	Glu	Lys	Lys	Leu	Lys	Glu	Gln	Lys	Lys	Asn	Asp	Ala	Gln	Lys				
			115					120					125						
Ala	Lys	Asp	Leu	Thr	Lys	Lys	Glu	Ser	Gln	Asp	Ser	Ser	Ser	Glu	Lys				
			130					135					140						
Ser	Leu	Lys	Glu	Lys	Val	Asn	Gly	Glu	Ala	Leu	Lys	Glu	Lys	Glu	Asn				
															160				
Lys	Glu	Thr	Leu	Lys	Lys	Lys	Glu	Leu	Glu	Asn	Gln	Lys	Glu	Lys	Glu				
				165					170						175				
Glu	Lys	Asn	Lys	Ile	Lys	Asp	Asn	Asn	Asp	Glu	Ala	Leu	Lys	Asn	Lys				
			180						185					190					
Gly	Asn	Asp	Lys	Asp	Asp	Lys	Lys	Ile	Val	Pro	Lys	Lys	Pro	Glu	Ser				
			195					200					205						
Val	Glu	Lys	Asp	Leu	Lys	Glu	Met	Glu	Leu	Lys	Glu	Lys	Glu	Phe	Ile				
							215						220						
Lys	Gln	His	Leu	Lys	Asp	Tyr	Glu	Glu	Arg	Lys	Glu	Lys	Arg	Arg	Asn				
															240				
Trp	Ile	Leu	Arg	Ser	Leu	Arg	Arg	Asp	Lys	Leu	Arg	Glu	Ile	Glu	Gln				
				245					250					255					
Leu	Glu	Lys	Leu	Asn	Ala	Gln	Leu	Glu	Ser	Ala	Ile	Asn	Glu	Leu	Lys				
				260				265					270						
Glu	Arg	Arg	Ala	Ser	Arg	Arg	Pro	Met	Met	Val	Lys	Met	Gln	Arg	Gly				
				275				280					285						
Met	Lys	Asp	Glu	Val	Asp	Glu	Trp	Ile	Lys	Lys	Tyr	Asp	Asp	Glu	Gln				
				290			295					300							
Ala	Glu	Lys	Asn	Gly	Thr	Lys	Asp	Glu	Glu	Ile	Lys	Asp	Lys	Gly	Asp				
															320				
Gly	Tyr	Glu	Glu	Ile	Val	Glu	Thr	Lys	Phe	Tyr	Gly	Met	Arg	Glu	Asn				
				325					330					335					
Ala	Leu	Gly	Glu	Leu	Asp	Glu	Tyr	Glu	Glu	Arg	Tyr	Glu	Lys	Lys	Arg				
				340				345					350						
Tyr	Tyr	Leu	Lys	Glu	Asp	Gly	Glu	Gly	Asp	Leu	Lys	Asp	Val	Glu	Glu				
				355				360					365						
Lys	Leu	Glu	Glu	Thr	Gly	Tyr	Gly	Phe	Arg	Glu	Lys	Phe	Pro	Thr	Thr				
				370				375					380						
Arg	Ile	Leu	Val	Lys	Arg	Lys	Arg	Asn	Lys	Glu	Gln	Lys	Lys	Leu	Lys				
															400				
Glu	Asp	Lys	Glu	Lys	Lys	Leu	Ile	Ala	Ala	Glu	Glu	Pro	Asp	Asp	Glu				
				405					410					415					
Lys	Lys	Ile	Lys	Leu	Lys	Asp	Ser	Asp	Asp	Lys	Val	Val	Val	Pro	Val				
				420				425					430						
Asn	Lys	Asn	Lys	Ser	Ser	Phe	Pro	Asp	Lys	Phe	Arg	Ala	Pro	Asp	Lys				
				435			440					445							

Lys	Arg	Thr	Met	Phe	Tyr	Arg	Leu	Ser	Glu	Leu	Phe	Pro	Ile	Val	Pro		
	450					455					460						
Arg	Lys	Asp	Asn	Glu	Leu	Ala	Val	Ser	Gly	Asp	Cys	Met	Asp	Ser	Lys		
465					470					475					480		
Val	Asn	Gly	Lys	Lys	Leu	Lys	Ser	Thr	Phe	Asn	Pro	Phe	Lys	Arg	Arg		
				485					490					495			
Arg	Asn	Lys	Leu	Lys	Glu	Arg	Lys	Met	Gln	Glu	Leu	His	Lys	Phe	Lys		
			500					505					510				
Lys	Asn	Tyr	Lys	Lys	Tyr	Gln	Lys	Leu	Leu	Glu	Arg	Glu	Lys	Arg	Glu		
		515					520					525					
Asn	Pro	Asp	Gly	Glu	Pro	Leu	Asn	Thr	Pro	Glu	Ile	His	Val	Ile	Arg		
	530					535					540						
Pro	Ser	Asp	Leu	Met	Asp	Lys	Gly	Glu	Asn	Lys	Ser	Ala	Gly	His	Pro		
545					550					555					560		
Phe	Lys	Tyr	Gln	Pro	Thr	Lys	Gly	Leu	Lys	Glu	Tyr	Glu	Glu	Ser	His		
				565					570					575			
Val	Ala	Lys	Asp	Tyr	Gln	Leu	Glu	His	Glu	Pro	Pro	Thr	Lys	Leu	Pro		
			580					585					590				
Glu	Tyr	Glu	Lys	Gly	His	Val	Ser	Arg	Glu	Tyr	Gln	Leu	Asp	Asn	Glu		
		595					600					605					
Val	Arg	Asp	Glu	Leu	Pro	Glu	Tyr	Glu	Lys	Gly	His	Val	Ser	Arg	Glu		
	610					615					620						
Tyr	Gln	Leu	Asp	Asn	Glu	Val	Arg	Asp	Glu	Leu	Pro	Glu	Tyr	Glu	Lys		
625					630					635					640		
Gly	His	Val	Ser	Arg	Glu	Tyr	Gln	Leu	Asp	Asn	Glu	Gly	Pro	Ser	Thr		
				645					650					655			
Leu	Lys	Glu	Tyr	Asp	Gln	Thr	Glu	Leu	Ala	Lys	Gly	Lys	Asp	Ile	Thr		
			660					665					670				
Asn	Lys	Pro	His	Glu	Ser	Val	Asp	Glu	Tyr	Asp	Gln	Ser	Glu	Leu	Ala		
		675					680					685					
Lys	Gly	Lys	Asp	Ile	Thr	Asn	Lys	Pro	His	Glu	Ser	Val	Asp	Glu	Tyr		
	690					695					700						
Asp	Gln	Thr	Glu	Leu	Ala	Lys	Gly	Lys	Glu	Val	Thr	Asn	Lys	Pro	His		
705					710					715					720		
Glu	Asn	Leu	Glu	Glu	Tyr	Asn	Glu	Thr	Asp	Leu	Ala	Lys	Gly	Lys	Glu		
				725					730					735			
Val	Thr	Asn	Lys	Pro	His	Glu	Ser	Val	Asp	Glu	Tyr	Asp	Gln	Ser	Glu		
			740					745					750				
Leu	Ala	Lys	Gly	Lys	Asp	Ile	Thr	Asn	Lys	Pro	His	Glu	Ser	Val	Asp		
		755					760					765					
Glu	Tyr	Asp	Gln	Thr	Glu	Leu	Ala	Lys	Gly	Lys	Glu	Val	Thr	Asn	Lys		
	770					775					780						
Pro	His	Glu	Asn	Leu	Glu	Glu	Tyr	Asn	Glu	Thr	Asp	Leu	Ala	Lys	Gly		
785					790					795					800		
Lys	Glu	Val	Thr	Asn	Lys	Ala	His	Glu	Asn	Leu	Glu	Glu	Tyr	Asn	Glu		
				805					810					815			

Thr Asp Leu Ala Lys Gly Lys Glu Val Thr Asn Lys Ala His Glu Asn  
 820 825 830  
 Leu Glu Glu Tyr Asn Glu Thr Asp Leu Ala Lys Gly Lys Glu Val Thr  
 835 840 845  
 Asn Lys Ala His Glu Asn Leu Glu Glu Tyr Asn Glu Thr Asp Leu Ala  
 850 855 860  
 Lys Gly Lys Glu Val Thr Asn Lys Ala Arg Glu Asn Leu Glu Glu Tyr  
 865 870 875 880  
 Asn Glu Thr Asp Leu Ala Lys Gly Lys Glu Val Thr Asn Lys Ala Arg  
 885 890 895  
 Glu Asn Leu Glu Glu Tyr Asn Glu Thr Asp Leu Ala Lys Gly Lys Glu  
 900 905 910  
 Val Thr Asn Lys Ala His Glu Asn Leu Glu Glu Tyr Asn Glu Thr Asp  
 915 920 925  
 Leu Ala Lys Gly Lys Glu Val Thr Asn Lys Ala His Glu Asn Leu Glu  
 930 935 940  
 Glu Tyr Asn Glu Thr Asp Leu Ala Lys Gly Lys Glu Val Thr Asn Lys  
 945 950 955 960  
 Ala His Glu Asn Leu Glu Glu Tyr Asn Glu Thr Asp Leu Ala Lys Gly  
 965 970 975  
 Lys Glu Val Thr Asn Lys Ala Arg Glu Asn Leu Glu Glu Tyr Asn Glu  
 980 985 990  
 Thr Asp Leu Ala Lys Gly Lys Glu Val Thr Asn Lys Ala Arg Glu Asn  
 995 1000 1005  
 Leu Glu Glu Tyr Asn Glu Thr Asp Leu Ala Lys Gly Lys Glu Val Thr  
 1010 1015 1020  
 Asn Lys Ala Arg Glu Asn Leu Glu Glu Tyr Asn Glu Thr Asp Leu Ala  
 1025 1030 1035 1040  
 Lys Gly Lys Glu Val Thr Asn Lys Ala Arg Glu Asn Leu Glu Glu Tyr  
 1045 1050 1055  
 Glu Glu Lys Asp Tyr Met Lys Asn Asn Glu Leu Gln Asn Lys Gly Ser  
 1060 1065 1070  
 Asp Gly Leu Lys Glu Asn Ala Glu Leu Lys Asn Lys Glu Leu Arg Asn  
 1075 1080 1085  
 Lys Gly Ser Asp Gly Leu Lys Glu Asn Ala Glu Leu Lys Asn Lys Glu  
 1090 1095 1100  
 Leu Arg Asn Lys Gly Ser Asp Gly Leu Lys Glu Asn Ala Glu Leu Lys  
 1105 1110 1115 1120  
 Asn Lys Glu Leu Gln Asn Lys Gly Ser Glu Gly Leu Lys Glu Asn Ala  
 1125 1130 1135  
 Glu Leu Lys Asn Lys Glu Leu Gln Asn Lys Gly Ser Glu Gly Leu Lys  
 1140 1145 1150  
 Glu Asn Ala Glu Leu Lys Asn Lys Glu Leu Arg Asn Lys Gly Ser Glu  
 1155 1160 1165  
 Gly Leu Lys Glu Asn Ala Glu Leu Lys Asn Lys Glu Leu Gln Asn Lys  
 1170 1175 1180  
 Gly Ser Glu Gly Leu Lys Glu Asn Ala Glu Leu Lys Asn Lys Glu Leu

1185                      1190                      1195                      1200  
 Gln Asn Lys Gly Ser Glu Gly Leu Lys Glu Asn Ala Glu Leu Lys Asn  
                                  1205                      1210                      1215  
 Lys Glu Leu Gln Asn Lys Gly Ser Glu Gly Leu Lys Glu Asn Ala Glu  
                                  1220                      1225                      1230  
 Leu Lys Asn Lys Glu Leu Arg Asn Lys Gly Ser Glu Gly Leu Lys Glu  
                                  1235                      1240                      1245  
 Asn Val Tyr Thr Asn Asn Asp Leu Lys Asn Asn Asp Ile Gln Asn Lys  
                                  1250                      1255                      1260  
 Asp Leu Ser Asn Lys Asp Met Lys Asn Lys Glu Leu Leu Asn Lys Asp  
                                  1265                      1270                      1275                      1280  
 Ile Ser Asn Lys Asp Met Lys Asn Lys Glu Leu Leu Asn Lys Asp Leu  
                                  1285                      1290                      1295  
 Ser Asn Glu Asp Met Lys Asn Lys Glu Leu Leu Asn Lys Asp Ile Arg  
                                  1300                      1305                      1310  
 Asn Lys Asp Leu Lys Ser Ile Gly Asn Met Glu Gln Gln Asn Thr Gly  
                                  1315                      1320                      1325  
 Leu Lys Asn Thr Pro Ser Lys Gly Gln Gln Asn Thr Gly Leu Lys Asn  
                                  1330                      1335                      1340  
 Thr Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser  
                                  1345                      1350                      1355                      1360  
 Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln  
                                  1365                      1370                      1375  
 Gln Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu Arg Gln Gln Asn Thr  
                                  1380                      1385                      1390  
 Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys  
                                  1395                      1400                      1405  
 Asn Thr Pro Ile Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro  
                                  1410                      1415                      1420  
 Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu Arg  
                                  1425                      1430                      1435                      1440  
 Gln Gln Asn Thr Gly Leu Lys Asn Ala Ala Asn Lys Gly Gln Gln Asn  
                                  1445                      1450                      1455  
 Thr Gly Leu Lys Asn Thr Pro Ser Lys Gly Gln Gln Asn Thr Gly Leu  
                                  1460                      1465                      1470  
 Lys Asn Thr Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys Asn Thr  
                                  1475                      1480                      1485  
 Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu  
                                  1490                      1495                      1500  
 Gly Gln Gln Asn Asn Asp Leu Lys Asn Thr Pro Asn Glu Arg Gln Gln  
                                  1505                      1510                      1515                      1520  
 Asn Thr Gly Leu Lys Asn Thr Ala Ser Lys Gly Gln Gln Asn Thr Gly  
                                  1525                      1530                      1535  
 Leu Lys Asn Ala Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys Asn  
                                  1540                      1545                      1550  
 Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser  
                                  1555                      1560                      1565

Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu Arg Gln  
 1570 1575 1580  
 Gln Asn Thr Gly Leu Lys Asn Thr Ala Ser Lys Gly Gln Gln Asn Thr  
 1585 1590 1595 1600  
 Gly Leu Lys Asn Ala Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys  
 1605 1610 1615  
 Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Ser Ala  
 1620 1625 1630  
 Ser Lys Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly  
 1635 1640 1645  
 Gln Gln Asn Asn Asp Leu Lys Asn Ala Pro Asn Glu Arg Gln Gln Asn  
 1650 1655 1660  
 Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu  
 1665 1670 1675 1680  
 Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr  
 1685 1690 1695  
 Pro Ser Gly Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu  
 1700 1705 1710  
 Arg Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln  
 1715 1720 1725  
 Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu Arg Gln Gln Asn Thr Gly  
 1730 1735 1740  
 Leu Lys Asn Ala Ala Asn Lys Gly Gln Gln Asn Thr Gly Leu Lys Asn  
 1745 1750 1755 1760  
 Thr Pro Asn Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser  
 1765 1770 1775  
 Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln  
 1780 1785 1790  
 Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr  
 1795 1800 1805  
 Gly Leu Lys Asn Thr Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys  
 1810 1815 1820  
 Asn Ala Ala Asn Lys Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro  
 1825 1830 1835 1840  
 Asn Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly  
 1845 1850 1855  
 Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn  
 1860 1865 1870  
 Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu  
 1875 1880 1885  
 Lys Asn Ala Ala Asn Lys Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr  
 1890 1895 1900  
 Pro Ser Gly Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu  
 1905 1910 1915 1920  
 Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln  
 1925 1930 1935

Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly  
 1940 1945 1950  
 Leu Lys Asn Thr Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys Asn  
 1955 1960 1965  
 Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser  
 1970 1975 1980  
 Glu Gly Gln Pro Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu Gly Gln  
 1985 1990 1995 2000  
 Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr  
 2005 2010 2015  
 Gly Leu Lys Asn Ala Ala Asn Lys Gly Gln Gln Asn Thr Gly Leu Lys  
 2020 2025 2030  
 Asn Thr Pro Asn Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro  
 2035 2040 2045  
 Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly  
 2050 2055 2060  
 Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn  
 2065 2070 2075 2080  
 Thr Gly Leu Lys Asn Ala Ala Asn Lys Gly Gln Gln Asn Thr Gly Leu  
 2085 2090 2095  
 Lys Asn Thr Pro Asn Glu Arg Gln Gln Asn Thr Gly Leu Lys Asn Thr  
 2100 2105 2110  
 Pro Asn Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu  
 2115 2120 2125  
 Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln  
 2130 2135 2140  
 Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly  
 2145 2150 2155 2160  
 Leu Lys Asn Thr Pro Ser Glu Gly Gln Pro Asn Thr Gly Leu Lys Asn  
 2165 2170 2175  
 Thr Pro Asn Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser  
 2180 2185 2190  
 Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Ala Ala Asn Lys Gly Gln  
 2195 2200 2205  
 Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr  
 2210 2215 2220  
 Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys  
 2225 2230 2235 2240  
 Asn Ala Ala Asn Lys Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro  
 2245 2250 2255  
 Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly  
 2260 2265 2270  
 Gln Gln Asn Thr Gly Leu Lys Asn Ala Ala Asn Lys Gly Gln Gln Asn  
 2275 2280 2285  
 Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Pro Asn Thr Gly Leu  
 2290 2295 2300  
 Lys Asn Thr Pro Asn Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr



2305                      2310                      2315                      2320  
 Pro Ser Glu Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu  
                                  2325                      2330                      2335  
 Gly Gln Gln Asn Thr Gly Leu Lys Asn Thr Pro Ser Glu Gly Gln Gln  
                                  2340                      2345                      2350  
 Asn Thr Gly Leu Lys Asn Thr Pro Asn Glu Gly Gln Gln Asn Asn Asp  
                                  2355                      2360                      2365  
 Leu Lys Asn Lys Ala Ser Lys Gly Gln Gln Asn Asn Asp Leu Glu Asn  
                                  2370                      2375                      2380  
 Asp Gly Leu Lys His Lys Pro Asn Gln Gly Gln Lys His Thr Glu Leu  
                                  2385                      2390                      2395                      2400  
 Asn Asn Lys Asn Leu Lys Asn Lys Pro Thr Asp Gly Leu Lys Asn Val  
                                  2405                      2410                      2415  
 Lys Asp Asp Glu Leu Ser Asp Asn Glu Ser Ser Asp Asn Glu Lys Ser  
                                  2420                      2425                      2430  
 Lys Lys Asn Leu Arg Gly Lys Lys Asn  
                                  2435                      2440

<210> 19  
 <211> 654  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 19  
 Met Lys Ser Phe Lys Asn Lys Asn Thr Leu Arg Arg Lys Lys Ala Phe  
   1                                 5                                 10                                 15  
 Pro Val Phe Thr Lys Ile Leu Leu Val Ser Phe Leu Val Trp Val Leu  
                                  20                                 25                                 30  
 Lys Cys Ser Asn Asn Cys Asn Asn Gly Asn Gly Ser Gly Asp Ser Phe  
                                  35                                 40                                 45  
 Asp Phe Arg Asn Lys Arg Thr Leu Ala Gln Lys Gln His Glu His His  
                                  50                                 55                                 60  
 His His His His His Gln His Gln His Gln His Gln Ala Pro His Gln  
                                  65                                 70                                 75                                 80  
 Ala His His His His His His Gly Glu Val Asn His Gln Ala Pro Gln  
    85                                 90                                 95  
 Val His Gln Gln Val His Gly Gln Asp Gln Ala His His His His His  
    100                                 105                                 110  
 His His His His Gln Leu Gln Pro Gln Gln Pro Gln Gly Thr Val Ala  
    115                                 120                                 125  
 Asn Pro Pro Ser Asn Glu Pro Val Val Lys Thr Gln Val Phe Arg Glu  
    130                                 135                                 140  
 Ala Arg Pro Gly Gly Gly Phe Lys Ala Tyr Glu Glu Lys Tyr Glu Ser  
    145                                 150                                 155                                 160  
 Lys His Tyr Lys Leu Lys Glu Asn Val Val Asp Gly Lys Lys Asp Cys  
    165                                 170                                 175  
 Asp Glu Lys Tyr Glu Ala Ala Asn Tyr Ala Phe Ser Glu Glu Cys Pro  
    180                                 185                                 190  
 Tyr Thr Val Asn Asp Tyr Ser Gln Glu Asn Gly Pro Asn Ile Phe Ala

195					200					205					
Leu	Arg	Lys	Arg	Phe	Pro	Leu	Gly	Met	Asn	Asp	Glu	Asp	Glu	Glu	Gly
210						215					220				
Lys	Glu	Ala	Leu	Ala	Ile	Lys	Asp	Lys	Leu	Pro	Gly	Gly	Leu	Asp	Glu
225					230					235					240
Tyr	Gln	Asn	Gln	Leu	Tyr	Gly	Ile	Cys	Asn	Glu	Thr	Cys	Thr	Thr	Cys
				245					250					255	
Gly	Pro	Ala	Ala	Ile	Asp	Tyr	Val	Pro	Ala	Asp	Ala	Pro	Asn	Gly	Tyr
			260					265					270		
Ala	Tyr	Gly	Gly	Ser	Ala	His	Asp	Gly	Ser	His	Gly	Asn	Leu	Arg	Gly
		275					280					285			
His	Asp	Asn	Lys	Gly	Ser	Glu	Gly	Tyr	Gly	Tyr	Glu	Ala	Pro	Tyr	Asn
	290					295					300				
Pro	Gly	Phe	Asn	Gly	Ala	Pro	Gly	Ser	Asn	Gly	Met	Gln	Asn	Tyr	Val
305					310					315					320
Pro	Pro	His	Gly	Ala	Gly	Tyr	Ser	Ala	Pro	Tyr	Gly	Val	Pro	His	Gly
				325					330					335	
Ala	Ala	His	Gly	Ser	Arg	Tyr	Ser	Ser	Phe	Ser	Ser	Val	Asn	Lys	Tyr
			340					345					350		
Gly	Lys	His	Gly	Asp	Glu	Lys	His	His	Ser	Ser	Lys	Lys	His	Glu	Gly
		355					360					365			
Asn	Asp	Gly	Glu	Gly	Glu	Lys	Lys	Lys	Lys	Ser	Lys	Lys	His	Lys	Asp
	370					375					380				
His	Asp	Gly	Glu	Lys	Lys	Lys	Ser	Lys	Lys	His	Lys	Asp	Asn	Glu	Asp
385					390					395					400
Ala	Glu	Ser	Val	Lys	Ser	Lys	Lys	His	Lys	Ser	His	Asp	Cys	Glu	Lys
				405					410					415	
Lys	Lys	Ser	Lys	Lys	His	Lys	Asp	Asn	Glu	Asp	Ala	Glu	Ser	Val	Lys
			420					425					430		
Ser	Lys	Lys	Ser	Val	Lys	Glu	Lys	Gly	Glu	Lys	His	Asn	Gly	Lys	Lys
		435					440					445			
Pro	Cys	Ser	Lys	Lys	Thr	Asn	Glu	Glu	Asn	Lys	Asn	Lys	Glu	Lys	Thr
	450					455					460				
Asn	Asn	Ser	Lys	Ser	Asp	Gly	Ser	Lys	Ala	His	Glu	Lys	Lys	Glu	Asn
465					470					475					480
Glu	Thr	Lys	Asn	Thr	Ala	Gly	Glu	Asn	Lys	Lys	Val	Asp	Ser	Thr	Ser
				485					490					495	
Ala	Asp	Asn	Lys	Ser	Thr	Asn	Ala	Ala	Thr	Pro	Gly	Ala	Lys	Asp	Lys
			500					505					510		
Thr	Gln	Gly	Gly	Lys	Thr	Asp	Lys	Thr	Gly	Ala	Ser	Thr	Asn	Ala	Ala
		515					520					525			
Thr	Asn	Lys	Gly	Gln	Cys	Ala	Ala	Glu	Gly	Ala	Thr	Lys	Gly	Ala	Thr
	530					535					540				
Lys	Glu	Ala	Ser	Thr	Ser	Lys	Glu	Ala	Thr	Lys	Glu	Ala	Ser	Thr	Ser
545					550					555					560
Lys	Glu	Ala	Thr	Lys	Glu	Ala	Ser	Thr	Ser	Lys	Glu	Ala	Thr	Lys	Glu
				565					570					575	

Ala Ser Thr Ser Lys Gly Ala Thr Lys Glu Ala Ser Thr Thr Glu Gly  
580 585 590

Ala Thr Lys Gly Ala Ser Thr Thr Ala Gly Ser Thr Thr Gly Ala Thr  
595 600 605

Thr Gly Ala Asn Ala Val Gln Ser Lys Asp Glu Thr Ala Asp Lys Asn  
610 615 620

Ala Ala Asn Asn Gly Glu Gln Val Met Ser Arg Gly Gln Ala Gln Leu  
625 630 635 640

Gln Glu Ala Gly Lys Lys Lys Lys Lys Arg Gly Cys Cys Gly  
645 650

<210> 20  
<211> 212  
<212> PRT  
<213> Plasmodium falciparum

<400> 20  
Met Lys Gly Ser Gly Ser Glu Lys Asn Val Tyr Leu Ser Asn Lys Asn  
1 5 10 15

Lys Glu Ile Asn Met Asn Gln Gln Ser Asp Asn Lys Met Cys Asp Glu  
20 25 30

Cys Asp Asp Met Asn Gln Pro Gly Asp Val Asn Lys Asn Asp Lys Thr  
35 40 45

Ser Asn Asp Gln Ala Asn Ser Ser Asp Ser Asp Cys Glu Pro Leu Pro  
50 55 60

Phe Gly Leu Lys Pro Ser Asp Leu Asn Arg Lys Val Thr Glu Glu Asp  
65 70 75 80

Leu Glu Arg Met Ile Ile Glu Leu Pro Gly Lys Leu Glu Arg Lys Asp  
85 90 95

Met Tyr Leu Ile Trp His Tyr Ser His Ser Leu Leu Arg Asp Lys Phe  
100 105 110

Asn Lys Met Lys Ser Ser Leu Trp Ser Ile Cys Gly Lys Leu Ala His  
115 120 125

Glu His Lys Leu Pro Phe Lys Ile Lys Met Lys Lys Trp Trp Lys Cys  
130 135 140

Cys Gly His Val Thr Asp Glu Leu Leu Ile Lys Glu His Asp Asp Tyr  
145 150 155 160

Asn Ser Ile Tyr Asn Tyr Ile Asn Asn Glu Ser Ser Ser Arg Glu Gln  
165 170 175

Phe Leu Ile Phe Leu Asn Met Ile Lys His Ser Trp Thr Thr Phe Thr  
180 185 190

Met Glu Thr Phe Ile Lys Cys Lys Ile Ser Leu Glu Asn Asn Met Arg  
195 200 205

Asn Val Thr Asn  
210

<210> 21  
<211> 255  
<212> PRT  
<213> Plasmodium falciparum

&lt;400&gt; 21

Met Asn Ile Leu Val Thr Leu Phe Ile His Thr Asn Lys Ile Tyr Thr  
 1 5 10 15

Ile Ile Ile Ile Thr Tyr Ile Val Leu Cys Tyr Leu Phe Leu Cys Ser  
 20 25 30

Phe Tyr Val Lys Lys Ser Ile Lys Asn Ile Thr Arg Glu Lys Lys Tyr  
 35 40 45

Met Tyr Gln Arg Ile Ile Val Glu Arg Glu Asp Val Ile Trp Lys Gln  
 50 55 60

Asp Phe Lys Ile Thr Leu Asn Glu Lys Ser Tyr Glu Arg Leu Asn Leu  
 65 70 75 80

Pro Thr Glu Lys Gln Ile Pro Tyr Ser Thr Cys Ser Glu Glu Ile Glu  
 85 90 95

Lys Val His Asn Leu Thr Thr Arg Val Thr Glu Ile Trp Lys Leu Leu  
 100 105 110

Leu Glu Gln Met Glu Val Lys Tyr Leu Ile Lys Thr Asp Asn Met Asn  
 115 120 125

His Lys Trp Arg Asp Phe Met Trp Glu Ser Lys Trp Ala Leu Tyr Leu  
 130 135 140

Glu Asn Val Tyr Lys Phe Ile Asn Asp Lys Leu Asn Glu Pro His Val  
 145 150 155 160

Ser Ile Val Glu Lys Glu Thr Phe Ile Gln Lys Trp Phe Ile Asn Thr  
 165 170 175

Ser His Asp Tyr Asn Tyr Phe Leu Asn Phe Val Phe Glu Arg Trp Lys  
 180 185 190

His Lys Val Lys Ser Val Cys Glu Gln Tyr Glu Val Leu Leu Tyr His  
 195 200 205

Ile Cys Ser Phe Leu Phe Phe Leu Ile Ser Leu Phe Ser Cys Ile Phe  
 210 215 220

Ile Tyr Leu Phe Leu Pro Phe Leu Cys Met Phe Val Tyr Leu Leu Pro  
 225 230 235 240

Phe Cys Leu Phe Leu Ile Ile Asn Phe Ile Asn Lys Pro Phe Met  
 245 250 255

&lt;210&gt; 22

&lt;211&gt; 1192

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 22

Met Leu Lys Lys Tyr Ile Ile Leu Ile Tyr Ile Gly Val Ile Leu Asn  
 1 5 10 15

Phe Ile Thr Lys Asn Asn Asn Val Val Ser Val Pro Glu Pro Phe Leu  
 20 25 30

Ser Gln Asn Lys Asp Ser Phe Glu Glu Lys Lys Tyr Thr Tyr Gly Asp  
 35 40 45

Asn Leu Gln Leu Gly Ala Ser Thr Ile Asn Thr Pro Lys Thr Gln Ser  
 50 55 60

Gln Glu Asn Lys Asp Ile Asn Lys Glu Thr Lys Asn Thr Ile Ile Lys

65						70						75						80
Lys	Thr	Asn	Asn	Phe	Pro	Ser	Thr	Leu	Asn	Glu	Lys	Phe	Pro	His	Lys			
				85					90					95				
Ile	Gln	Leu	Thr	Asn	Lys	Glu	Asn	Lys	Glu	Asp	Glu	Gln	Asn	Lys	Glu			
			100					105					110					
Asn	Lys	Lys	Asp	Glu	Gln	Asn	Lys	Glu	Asp	Glu	Gln	Asn	Lys	Gln	Asn			
		115					120					125						
Lys	Glu	Asp	Glu	Gln	Asn	Lys	Gln	Asn	Lys	Asp	Lys	Lys	Asn	Ile	Val			
	130					135					140							
Ser	Asn	Lys	Leu	Ser	Gly	Asn	Asn	Glu	Gln	Gln	Asn	Asn	Ser	Ile	Pro			
145					150					155					160			
Lys	Ser	Ile	Gln	Lys	Pro	Glu	Asn	Cys	Val	Lys	Lys	Gln	Ser	Asn	Gln			
				165					170					175				
Phe	Pro	Arg	Ser	Tyr	Pro	Glu	Phe	Phe	Glu	Ala	Asn	Phe	Gly	Pro	Ile			
			180					185					190					
Asp	Glu	Leu	Met	Asp	Glu	Thr	Asp	Tyr	Ser	Ser	Asp	Asp	Leu	Glu	Asp			
		195					200					205						
Gln	Leu	Asn	Tyr	Gly	Tyr	Arg	Gly	Ile	Glu	His	Asp	Ile	Asp	Glu	Thr			
	210					215					220							
Asp	Tyr	Tyr	Ile	Gly	Ser	Ile	Leu	Gly	Tyr	Ser	Asp	Phe	Met	Asn	Lys			
225					230					235					240			
Met	Lys	Tyr	Gln	Asn	Thr	Gln	Ile	Asp	Asn	Asn	Lys	Gly	Lys	Lys	Thr			
				245					250					255				
Thr	Asn	Thr	Met	Glu	Lys	Asn	Lys	Lys	Asn	Arg	Asp	Lys	Lys	His	Ser			
			260					265					270					
Lys	Lys	Arg	Lys	Thr	Lys	Gln	Asn	Tyr	Lys	Tyr	Lys	Lys	Glu	Asn	Gln			
		275					280					285						
Asn	Ile	Glu	Asn	His	Ile	Pro	Gln	Ser	Lys	Tyr	Lys	Gln	Glu	Arg	Ile			
	290					295					300							
Glu	Ile	Leu	Asp	Asp	Asn	Gly	Lys	Glu	Leu	Lys	Ser	His	Lys	Asn	Ile			
305					310					315					320			
Lys	Glu	Glu	Lys	Gly	Gly	Ile	Glu	Lys	Thr	Asp	Thr	Thr	Asn	Ile	Ala			
				325					330					335				
Asp	Ile	Lys	Ile	Lys	Lys	Glu	Glu	Arg	Glu	Thr	Lys	Asp	Glu	Lys	Glu			
			340					345					350					
Lys	Asn	Ile	Gln	Gln	Leu	Val	Lys	Asp	Val	Gln	Leu	Ile	Lys	Val	Gly			
		355				360						365						
Glu	Glu	Thr	Lys	Asp	Asp	Glu	Lys	Glu	Asp	Lys	Glu	Gly	Thr	Asp	Asp			
	370					375					380							
Glu	Glu	Asp	Thr	Asp	Asp	Glu	Glu	Asp	Thr	Asp	Asp	Glu	Glu	Asp	Thr			
385					390					395					400			
Asp	Asp	Glu	Glu	Asp	Thr	Ser	Asp	Glu	Glu	Thr	Thr	Gly	Asp	Gln	Glu			
				405					410					415				
Asn	Lys	Glu	Glu	Thr	Glu	Val	Asp	Glu	Lys	Lys	Thr	Glu	Lys	Ala	Glu			
			420				425						430					
Glu	Glu	Leu	Glu	Glu	Asp	Lys	Glu	Glu	Ser	Glu	Lys	Asp	Lys	Glu	Glu			
		435					440					445						

Ser Glu Lys Asp Lys Glu Glu Ser Glu Lys Asp Lys Glu Glu Ser Glu  
 450 455 460  
 Lys Asp Lys Glu Lys Thr Glu Glu Asp Glu Glu Lys Thr Glu Asp Glu  
 465 470 475 480  
 Lys Gly Thr Glu Val Tyr Lys Lys Glu Thr Asp Val Asp Glu Lys Lys  
 485 490 495  
 Glu Lys Gly Glu Tyr Gly Glu Gly Thr Asp Asp Glu Glu Asp Lys Glu  
 500 505 510  
 Lys Glu Glu Asp Asp Glu Glu Thr Lys Val Glu Glu Lys Lys Thr Glu  
 515 520 525  
 Lys Asp Glu Glu Gly Thr Asp Tyr Glu Glu Asp Thr Asp Asp Ser Asp  
 530 535 540  
 Lys Asp Glu Glu Thr Lys Val Glu Glu Lys Lys Thr Glu Arg Asp Glu  
 545 550 555 560  
 Glu Glu Thr Glu Glu Asp Glu Lys Glu Thr Glu Val Glu Lys Lys Lys  
 565 570 575  
 Thr Glu Lys Asp Glu Glu Gly Thr Asp Tyr Glu Glu Asp Thr Asp Asp  
 580 585 590  
 Ser Asp Lys Asp Val Glu Thr Glu Val Glu Glu Thr Asp Ala Glu Asp  
 595 600 605  
 Lys Glu Glu Asn Glu Glu Gly Thr Asp Asp Glu Glu Asp Lys Val Glu  
 610 615 620  
 Glu Thr Asp Leu Asp Asp Gln Glu Glu Asp Gly Glu Glu Asp Lys Glu  
 625 630 635 640  
 Asp Asp Lys Glu Lys Asp Lys Glu Asp Asp Lys Glu Asp Asp Lys Glu  
 645 650 655  
 Lys Asp Lys Glu Asp Asp Lys Glu Lys Tyr Lys Glu Asp Asp Lys Glu  
 660 665 670  
 Asp Asp Lys Glu Asp Asp Lys Glu Lys Asp Lys Glu Asp Asn Lys Glu  
 675 680 685  
 Lys Asp Lys Glu Asp Asn Lys Glu Lys Asp Lys Glu Asp Asp Lys Glu  
 690 695 700  
 Lys Asp Lys Glu Asp Asp Lys Glu Lys Asp Lys Glu Asp Asn Lys Glu  
 705 710 715 720  
 Lys Asp Lys Glu Asp Asn Lys Glu Lys Asp Lys Glu Asp Asp Lys Glu  
 725 730 735  
 Lys His Asp Lys His Val Arg Arg Ile Lys Lys Lys Met Lys Asp Asp  
 740 745 750  
 Asp Tyr Asp Glu Ser Leu Lys Thr Lys Asn Tyr Tyr Pro His Asn Met  
 755 760 765  
 Thr Phe Gly Gln Gln Gln Tyr Phe Pro Tyr Tyr Asn Pro Leu Glu Gln  
 770 775 780  
 Gln Asn Tyr Gln Leu His His Ile Ile Lys Gln Gln Gln Asn Tyr His  
 785 790 795 800  
 Pro His His Ile Ile Lys Gln Gln Gln Asn His Asn Pro His His Ile  
 805 810 815

Leu Gln Glu Gln Glu Lys His His Pro Gln Gly Ile Pro Lys Glu Gln  
 820 825 830  
 Pro Tyr Asn Asn Val Pro Tyr Ile Leu Lys Lys Gly Leu Glu Pro Lys  
 835 840 845  
 Thr His Asn His Val Lys Glu Asp Gln Pro Asn Ile Lys Gln Gly Val  
 850 855 860  
 Val Lys Gly Gln Glu Pro His Val Asp Asp Met His Asn Asn Thr Lys  
 865 870 875 880  
 Glu His Lys Asn Phe Lys Asn Thr Thr Asp Val Lys Gln Pro Ala Ser  
 885 890 895  
 His Ile Tyr Asn Asn Ser Ser Glu Lys Gln Ile Glu His Val Tyr Asn  
 900 905 910  
 Lys Ser Pro Glu Lys Gln Ile Glu His Val Tyr Asn Lys Ser Pro Glu  
 915 920 925  
 Lys Gln Ile Glu His Val Tyr Asn Asn Ser Pro Glu Lys Gln Ile Glu  
 930 935 940  
 His Val Tyr Asn Asn Ser Pro Glu Lys Gln Ile Glu His Val Tyr Asn  
 945 950 955 960  
 Asn Ser Pro Glu Lys Gln Ile Glu His Val Tyr Asn Asn Ser Pro Glu  
 965 970 975  
 Lys Pro Ala Arg His Thr Asn Asn Ile Ser Leu Glu Lys Gln Asn Ser  
 980 985 990  
 His Lys Tyr Asn Val Asn Ile Gln Asp Arg His Asp Pro Val Tyr Tyr  
 995 1000 1005  
 Lys Tyr Glu Asp Met Leu Lys Arg Asp Lys Asp Leu Phe Thr Ile Ile  
 1010 1015 1020  
 Asn Asn Ile Cys Glu Leu Glu Phe Asn Ser Thr Asn Asn Tyr Leu Met  
 1025 1030 1035 1040  
 Lys Ile Ile Asn Asn Asp Lys Leu Lys His Asn Ser Leu Asn Asp Asn  
 1045 1050 1055  
 Glu Ala Ile Leu Lys Glu Ile Thr Lys Thr Gln Asn Glu Leu Phe Ser  
 1060 1065 1070  
 Leu Lys Leu Pro Leu Glu Ile Lys Val Ser Met Ala Leu Arg Ile Ser  
 1075 1080 1085  
 Glu Arg Leu Arg Ala Phe Val Phe Asp Lys Asp Leu Thr Ala Tyr Tyr  
 1090 1095 1100  
 Ile Lys Lys Leu Lys Asp Ile Phe Lys Leu Glu Thr Glu Ala Ala Lys  
 1105 1110 1115 1120  
 Asn Tyr Tyr Tyr Tyr Val Lys Cys Gln Lys Thr Phe Ser Asp Lys Lys  
 1125 1130 1135  
 Arg Leu Val Asn Asn Leu Asp Ser Ile Lys Leu Tyr Tyr Glu Ser Gln  
 1140 1145 1150  
 Ile Asn Lys Asn Phe Ile Ser Ile Pro Lys Asp Lys Ile Pro Thr Ala  
 1155 1160 1165  
 Ile Tyr Arg Ile Ser Asn Leu Val Asn Asp Leu Ile Phe Leu Leu Pro  
 1170 1175 1180  
 Gln Ser Asn Ala Asn Lys Ala Leu

1185

1190

<210> 23  
 <211> 106  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 23  
 Met Lys Leu Ser Lys Ile Leu Tyr Phe Phe Ala Ala Leu Leu Ala Leu  
   1                  5                  10                  15  
 Asn Phe Ile Ala Pro Arg Asp Tyr Asn Ser Met Val Glu Ala Lys Pro  
                   20                  25                  30  
 Ala Lys Lys Leu Thr Pro Ala Glu Arg Lys Lys Arg Asn Gln Asn Ile  
                   35                  40                  45  
 Met Ile Tyr Ser Ser Ile Ala Ser Ala Val Ala Leu Leu Ile Gly Gly  
   50                  55                  60  
 Ala Val Gly Leu Gly Ile His Leu His Lys Asn Asn Lys Gly Asp Asn  
   65                  70                  75                  80  
 Lys Lys Gly Thr Pro Gly Ala Lys Lys Asn Asp Asn Lys Ala Val Asn  
                   85                  90                  95  
 Pro Ser Ile Ser Ser Thr Met Tyr Arg Ala  
                   100                  105

<210> 24  
 <211> 1308  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 24  
 Met Phe Ile Phe Phe Leu Phe Phe Phe Tyr Asn Asp Val Met Thr Arg  
   1                  5                  10                  15  
 Asn Met Phe Phe Leu Tyr Asn Lys Leu Thr Gly Ser Ser Arg Lys Phe  
                   20                  25                  30  
 Asp Asp Ile Leu Lys Glu Lys Asn Ala Asp Val Glu Lys Lys Asp Val  
   35                  40                  45  
 Thr Leu Asn Leu Asp Glu Lys Lys Asn Val Glu Glu Tyr Lys Lys Asn  
   50                  55                  60  
 Lys Asp Val Phe Lys Asn Glu Glu Asp Asn Phe Phe Phe Val Phe Asp  
   65                  70                  75                  80  
 Asp Lys Glu Ile Asn Lys Leu Asn Lys Ile Lys Glu Glu Gln Cys Asn  
                   85                  90                  95  
 Met Lys Glu Asn Glu Phe Ile Asn Glu Lys Gly Tyr Ile Leu Asn Asp  
                   100                  105                  110  
 Glu Asn Val Ser Thr Ile Asn Asn Ile Thr Ser Leu Asn Asn Asp Ile  
   115                  120                  125  
 Leu His Ser Ser Asp Lys Asn Val Cys Thr Ser Tyr Asn Ile Tyr Pro  
   130                  135                  140  
 Ser Asn Gly Asn Asn Asn Asn Asn Asn Asn Asn Asn Val Ile His  
   145                  150                  155                  160  
 Ser Asn Asn Ser Asn Ile Phe Val Asn Asp Ser His Met Glu His Phe  
                   165                  170                  175



Asp Asp Ile Thr Asp Glu Phe Phe Lys Ile Asp Gln Thr Asn Phe Ser  
 180 185 190  
 Phe Phe Gln Phe Asn Thr Ser Phe Glu Asn Lys Lys Asn Val Asn Glu  
 195 200 205  
 Glu Glu Leu Met Lys His Thr Asp Asn Ile Asn Ile Cys Asp Lys Ile  
 210 215 220  
 Ile Asp Lys Lys Lys Asn Cys Asn Thr Leu Ser Asp Leu Ile His Asp  
 225 230 235 240  
 Asp Asn Leu Phe Asn Asp Asn Leu Asn Ile Tyr Glu Asp Asn Asn Asn  
 245 250 255  
 Lys Asp Asp Val Ile Ser Thr Asp Leu Phe Met Leu Lys Asn Asn Tyr  
 260 265 270  
 Asn Lys Asn Phe Glu Lys Asn Glu Ile Asp Val Val Val Asp Thr Ser  
 275 280 285  
 Thr Thr Phe Glu Asn Ile Asn Asn Asp Asn Asn Glu Lys Asn Leu Tyr  
 290 295 300  
 Asn Leu Asn Asn Gln Met Ser Asp Lys Glu Leu Leu Asn Asn Asn Lys  
 305 310 315 320  
 Asp Asp Thr Phe Tyr Ile Asn Asn Lys Phe Leu Ile Ser Glu Asn Asn  
 325 330 335  
 Ile Leu Leu Glu Asp Lys Asp Ile Ser Phe Ile Asp Arg Lys Ile Glu  
 340 345 350  
 Ser Asn Lys Cys Glu Asp Tyr Cys Val Asn Asn Asn Asn Asn Asn Asn  
 355 360 365  
 Glu Arg Asn Asn Leu Ser Asp Ile Leu Glu Asn Ala Tyr Ser Lys Asp  
 370 375 380  
 Cys Glu Ser Arg Thr Ile Asn Glu Asp Arg Ile Tyr Asn Asn Phe Glu  
 385 390 395 400  
 Asp Met Asp Lys Ile Ser His Asp Ala Phe Asp Phe Ile Ile Pro Ser  
 405 410 415  
 Ser Phe Asn Lys Glu Glu Asp Asn Gly Asn Glu Lys Tyr Gln Asn Val  
 420 425 430  
 Phe Asp Ser Asn Lys Asp Asn Leu Glu Asn Ile Asn Val Glu Asp Pro  
 435 440 445  
 Pro Phe Ser Asn Phe Ser Glu Glu Lys Gln Asn Phe Phe Gln Asn Cys  
 450 455 460  
 Asp Met Ser Glu Asn Ile Trp Leu Asn Lys Lys Phe Asp Glu His Asn  
 465 470 475 480  
 Val Phe Glu Lys Asn Glu Ile Tyr Glu Pro Lys Asn Val Tyr Glu Asn  
 485 490 495  
 Glu Asn Tyr Asp Gln Lys Asp Val Asp Glu Ser Ser Lys Phe Phe Glu  
 500 505 510  
 Asn Asn Val Phe Phe Trp Asp Asp Lys Asn Lys Asn Val Asp Glu Ile  
 515 520 525  
 Ile Asp Ser Gly Val Glu Gly Asn Cys Asp Val Glu Glu Lys Leu Asp  
 530 535 540  
 Lys Glu Glu Glu Lys Thr Tyr Phe Val Glu Thr Gly Ile Asn Tyr Gly

545		550		555		560									
Asp	Glu	Leu	Pro	Arg	Arg	Asn	Phe	Glu	Glu	Ile	Asp	Glu	Asn	Tyr	Lys
				565					570					575	
Glu	Val	Val	Glu	Glu	Lys	Phe	Asp	Glu	Lys	Met	Gly	Glu	Asn	Phe	Phe
			580					585					590		
Glu	Glu	Val	Glu	Glu	Lys	Tyr	Asp	Glu	Lys	Val	Gly	Lys	Asn	Ile	Phe
		595					600					605			
Glu	Glu	Val	Glu	Glu	Lys	Phe	Asp	Glu	Lys	Met	Arg	Glu	Asn	Ile	Phe
		610				615					620				
Ala	Glu	Ile	Glu	Glu	Glu	Lys	Tyr	Asp	Glu	Lys	Met	Gly	Glu	Asn	Ile
625					630					635					640
Phe	Glu	Glu	Val	Glu	Glu	Asn	Phe	Gly	Glu	Lys	Val	Gly	Lys	Asn	Ile
			645					650						655	
Phe	Glu	Glu	Val	Glu	Glu	Lys	Phe	Asp	Glu	Lys	Met	Gly	Glu	Phe	Phe
			660					665					670		
Phe	Asp	Glu	Val	Glu	Glu	Lys	Phe	Asp	Glu	Lys	Met	Gly	Glu	Phe	Phe
		675					680					685			
Phe	Asp	Glu	Val	Glu	Glu	Lys	Phe	Asp	Glu	Lys	Met	Gly	Glu	Asn	Ile
		690				695					700				
Phe	Glu	Glu	Ile	Pro	Lys	Lys	Asp	Asp	Val	Glu	Ile	Glu	Glu	Thr	Tyr
705					710					715					720
Ser	Glu	Lys	Met	Trp	Glu	Ile	His	Asp	Glu	Lys	Ile	Lys	Asp	Lys	Tyr
			725					730						735	
Asp	Glu	Pro	Tyr	Glu	Lys	Ile	His	Asp	Glu	Lys	Lys	Glu	Val	Glu	Glu
			740					745					750		
Phe	Phe	Leu	Ile	Ala	Asp	Lys	Lys	Lys	Glu	Glu	Asn	Glu	Asp	Ser	Asn
		755					760					765			
Val	Glu	Ile	Leu	Asn	Ile	Asp	Lys	Asn	Asn	Phe	Tyr	Phe	Glu	Asn	Lys
	770					775					780				
Glu	Thr	Phe	Glu	Ile	Asp	Glu	Lys	Val	Ser	Lys	Met	Asn	Glu	Glu	Asp
785					790					795					800
Phe	Val	Tyr	Glu	Asn	Asn	Glu	Thr	Phe	Glu	Cys	Glu	Asp	Ile	Phe	Leu
			805					810					815		
Lys	Arg	Glu	Asp	Asn	Asp	Asp	Ser	Glu	Asn	Glu	Lys	Glu	Ile	Asp	Glu
			820					825					830		
Ile	Gly	Glu	Val	Ile	Asn	Ile	Gly	Lys	Tyr	His	Leu	Asn	Asn	Lys	Asn
		835					840					845			
Asn	Ser	Tyr	Asp	Asp	Val	His	Ile	Leu	Thr	His	Asp	Phe	Lys	Asn	Glu
		850				855					860				
Leu	Leu	Ile	Glu	Lys	Tyr	Asn	Val	Asp	Asn	Ile	Cys	Ser	Asp	Asp	Asn
865					870					875					880
Ile	Tyr	Asp	Gly	Asp	Asn	Ile	Cys	Gly	Asp	Asp	Asn	Ile	Tyr	Asp	Gly
			885					890					895		
Asp	Asn	Ile	Tyr	Ser	Gly	Asp	Asn	Ile	Tyr	Gly	Gly	Asp	Asn	Ile	Tyr
			900					905					910		
Ser	Gly	Asp	Asn	Ile	Tyr	Ser	Gly	Asp	Asn	Ile	Tyr	Ser	Gly	Asp	Asn
		915					920						925		

Ile His Ser Gly Asp Asn Ile Tyr Ser Gly Asp Asn Ile Asp Asp Asp  
 930 935 940  
 Asn Ile Tyr Asp Gly Asp Asn Ile Asn Ser Gly Asp Asn Val Glu Asn  
 945 950 955 960  
 Leu Leu Lys Glu His Lys Ile Ala Val Asn Glu Ser Glu Glu Ile Ala  
 965 970 975  
 Gln Asp Ile Lys Glu Lys Tyr Glu Lys Arg Asp Asn Glu Phe Thr Asp  
 980 985 990  
 Tyr Val Glu Glu Asn Ser Asp Ile Arg Phe Tyr Asp Lys Gly Lys Gly  
 995 1000 1005  
 Glu Met Val Asn Glu Leu Ile Gly Glu Tyr Ser Glu Lys Tyr Met Asp  
 1010 1015 1020  
 Asn Asn Ile Glu Asp Asn Glu Leu Val Ile Trp Ser Ala Ser Val Lys  
 1025 1030 1035 1040  
 Asn Asp Lys Glu Arg Leu Asn Asp Asp Asn Ile Asp Leu Asn Asn Asn  
 1045 1050 1055  
 Ile Ser Asn Asp Tyr Ile Lys Asn Asn Asn Glu Asp Ile Lys Asn Val  
 1060 1065 1070  
 His Asp Ser Phe Ser Ile Ser Asn Lys Ser Glu Leu His Asp Ile Asn  
 1075 1080 1085  
 Gly Ile Leu Glu Lys Ser Ile Ser Ser Asn Asp Ile Lys Ser Ile Glu  
 1090 1095 1100  
 Val Cys Val Lys Lys Glu Asn Glu Ile His His Lys Asn Met Met Lys  
 1105 1110 1115 1120  
 Lys Lys Lys Glu Leu Asn Asn Asp Asn Asn Leu Asn Asp Glu Met Tyr  
 1125 1130 1135  
 Met Cys Asp Ile Ser Asn Asp Ile Phe Lys Asn Asn Glu Tyr Thr Lys  
 1140 1145 1150  
 His Val Asp Asp Val Tyr Thr Phe Asp Glu Asn Asn Ser Asn Asn Leu  
 1155 1160 1165  
 Ile Ile Gly Glu Asp Glu His Cys Val Ser Ser Met Asn Phe Glu Tyr  
 1170 1175 1180  
 Pro Phe Asn Ile Ser Lys Met Asn Thr Glu Ser Asn Asn Ile Leu Tyr  
 1185 1190 1195 1200  
 Glu Gln Asn Asp Lys Lys Lys Thr Asn Ile Asn Ser Val Lys His Pro  
 1205 1210 1215  
 Met Thr Tyr Ile Lys Gly Phe Glu Tyr Ala Ser Asp Ser Ile Asn Phe  
 1220 1225 1230  
 Leu Lys Ala Leu Lys Gly Leu Pro Pro Leu Pro Phe Leu Lys Cys Lys  
 1235 1240 1245  
 Asp Met Lys Pro Tyr Met Arg Leu Phe Asn Ile Val Leu Lys Val Ile  
 1250 1255 1260  
 Glu Ser Asn Asp Tyr Asn Gly Lys Arg Lys Ile Lys Val Thr Lys Met  
 1265 1270 1275 1280  
 Phe Ile Cys Leu Lys Leu Lys Phe Phe Asp Met Ile Tyr Val Phe Ile  
 1285 1290 1295

Ile Tyr Phe Ile Leu Tyr Ile Phe Leu Phe Phe Lys  
 1300 1305

<210> 25  
 <211> 538  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 25  
 Met Val His Leu Ser Lys Arg Asn Asn Ile Lys Ser Phe Leu Asn Tyr  
 1 5 10 15  
 Cys Lys Ala Lys Tyr Leu Asn Pro Leu Leu Ile Asn Lys Asn Glu Asp  
 20 25 30  
 Ile Ile Lys Glu Thr Ser Ile Leu Lys Asn Asn Asn Leu Tyr Ser Arg  
 35 40 45  
 Lys Glu Ser Asn Val Phe Ile Glu Ile Leu Lys Ser Ser Phe Ile Lys  
 50 55 60  
 Phe Arg Gly Gln Lys Ile Asn Glu Glu Ile Asn Asn His Asn Asn Ile  
 65 70 75 80  
 Ile Asn Asn Ser Ser His Asn Asn Asn His Asn Ile Tyr His Asp Thr  
 85 90 95  
 Asn Lys Lys Lys Lys Gln Gln Tyr Glu Glu Lys His Asn Val Phe His  
 100 105 110  
 Thr Glu Asn Met His Lys Glu Val Leu Leu Cys Met Asp Val Leu Gln  
 115 120 125  
 Tyr Glu Glu Asp Lys Val Asn Arg Glu Leu His Leu Leu His Ser Tyr  
 130 135 140  
 Phe Asn Lys Glu Arg Thr Asn Ile Asp Pro Tyr Thr Leu Cys Glu Ser  
 145 150 155 160  
 Lys Ile Lys Asn Ile Asp Glu Tyr Ile Tyr Asn Ile Ile Lys Thr Asn  
 165 170 175  
 Tyr Lys Asn Ile Asp Glu Phe Ile Thr Tyr Ile Tyr Leu Tyr Lys Gly  
 180 185 190  
 Lys Arg Phe Arg Val Ile Leu Ser Ile Leu Leu Lys Asn Ile Leu His  
 195 200 205  
 His Ile Asp Asn Val Ser Lys Ile Lys Thr Asn Phe Lys Asn Arg Asn  
 210 215 220  
 Ile Gln Arg Lys Phe Phe Lys Ser Asn Lys Leu Thr Ser Asn Tyr Leu  
 225 230 235 240  
 Ser Asn Lys Leu Lys Leu Tyr Asn Leu Lys Ile Thr Gln Lys Lys Asn  
 245 250 255  
 Ile Cys Glu Lys Thr Val Leu Asp Asn Gln Cys Lys Ile Ile Ala Ala  
 260 265 270  
 Ser Glu Ile Ile His Met Gly Ser Leu Leu His Asp Asp Val Ile Asp  
 275 280 285  
 Asp Ser Asn Lys Arg Arg Gly Val Ile Ala Leu His Lys Lys Phe Gly  
 290 295 300  
 Asn Lys Ile Ser Ile Leu Ser Gly Asp Tyr Leu Leu Ala Arg Ala Ser  
 305 310 315 320

Ser Ile Phe Ala Gly Thr Gly Ser Pro Lys Ile Cys Arg Ser Phe Ser  
 325 330 335  
 Tyr Val Val Glu Ser Leu Ile Lys Gly Glu Phe Leu Gln Arg Asn Leu  
 340 345 350  
 Lys Phe Asn Asn Val Glu Glu Ala Leu Lys Met Tyr Leu Ile Lys Ser  
 355 360 365  
 Tyr His Lys Thr Ala Ser Leu Phe Ser His Leu Phe Ala Cys Ile Ala  
 370 375 380  
 Ile Leu Ser Phe Lys Asn Asp Thr Ile Ile Gln Leu Cys Phe Asn Leu  
 385 390 395 400  
 Gly Leu His Ile Gly Met Ala Phe Gln Leu Tyr Asp Asp Tyr Leu Asp  
 405 410 415  
 Tyr Lys Ile Asp Asp Asn Thr Asn Lys Pro Ile Leu Asn Asp Leu Lys  
 420 425 430  
 Asn Asn Ile Lys Thr Ala Pro Leu Leu Phe Ser Tyr Asn Tyr Asn Pro  
 435 440 445  
 Gln Val Ile Leu Gln Leu Ile Asn Lys Asn Ser Tyr Thr Asn Asn Asp  
 450 455 460  
 Ile Glu Asn Ile Leu Tyr Tyr Ile Gln His Ser Asn Ser Met Lys Lys  
 465 470 475 480  
 Asn Glu Leu Cys Ser Leu Leu His Ile Lys Lys Ala Ser Asp Ile Leu  
 485 490 495  
 Tyr Ser Leu Ile Ser His Cys Asn Lys Pro Ser Thr Asn Lys Asn Asn  
 500 505 510  
 Thr Lys His Asp Asp Ile Lys Gln Ser Ser Glu Ala Leu Ile Asn Leu  
 515 520 525  
 Ile Leu Asn Val Leu Ser Arg Asn Val Lys  
 530 535

<210> 26  
 <211> 115  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 26  
 Met Gly Gly Asp Ile Phe Arg Leu Leu Pro Thr Glu Ala Thr Gly Cys  
 1 5 10 15  
 Leu Ile Arg Ile Lys Asn Ile Ser Cys Phe Asp Lys Lys Ser Glu Val  
 20 25 30  
 Ile Asn Phe Val Gly His Leu Val Glu Ile Cys Leu Ile His Val Asp  
 35 40 45  
 Phe Leu Lys Asn Glu Ala Tyr Val Leu Leu His Ser Arg Glu Glu Val  
 50 55 60  
 Leu His Phe Met Lys Leu Tyr Tyr Val Ile Cys Asn Asn Met His Phe  
 65 70 75 80  
 Ile Asp Lys Thr Lys Arg Asn Ile Glu Ile Glu Ile Tyr Asn Glu Glu  
 85 90 95  
 Glu Glu Asn Val Phe Trp Lys Glu Ser Lys Arg Asn Cys Thr Lys Phe  
 100 105 110

Asn Ile Trp  
115

<210> 27  
<211> 78  
<212> PRT  
<213> Plasmodium falciparum

<400> 27  
Met Phe Pro Phe Leu Tyr Phe Ser Phe Asn Pro Ile Arg Pro Ala Arg  
1 5 10 15  
Ser Lys His Cys Ser Tyr Cys Ser Ser Cys Ile Ser Arg Tyr Asp His  
20 25 30  
His Cys Phe Leu Leu Asn Asn Cys Ile Gly Gly Tyr Asn Asn Met Tyr  
35 40 45  
Tyr Leu Val Phe Leu His Ile His Ile Ile Ile Thr Phe Tyr Ser Thr  
50 55 60  
Tyr Ile Ser Lys Tyr Thr His Thr Gln Lys Ile Lys Ile Lys  
65 70 75

<210> 28  
<211> 1979  
<212> PRT  
<213> Plasmodium falciparum

<400> 28  
Met Val Phe Thr Phe Lys Asn Lys Lys Lys Lys Lys Glu Ala Ser Ser  
1 5 10 15  
Asp Lys Val Ser Lys Glu Ser Phe Asn Glu Glu Asp Asn Glu Asn Asn  
20 25 30  
Glu Lys Arg Glu Lys Ser Asp Ser Trp Tyr Lys Lys Ile Ile Glu Thr  
35 40 45  
Lys Gly Lys Ser Lys Thr Lys Tyr Lys Asn Asp Asn Ser Leu Asp Asp  
50 55 60  
Asn Ile Asn Glu Asp Ile Ile Asn Asn Asn Asn Asn Asn Asn Asp  
65 70 75 80  
Asn Asn Asn Asp Asn Asn Asn Asp Asn Asn Asn Asp Asn Asn Asn Asp  
85 90 95  
Asn Asn Asn Asp Asn Asn Asn Glu Asn Asn Asn Asp Asn Asn Asn Phe  
100 105 110  
Asn Asn Tyr Ser Asp Glu Ile Ser Lys Asn Ile Ile His Lys Asp Asn  
115 120 125  
Glu Leu Glu Asn Gln Leu Lys Asp Thr Leu Lys Ser Ile Ser Ser Leu  
130 135 140  
Ser Asn Lys Ile Val Asn Tyr Glu Ser Lys Ile Glu Glu Leu Glu Lys  
145 150 155 160  
Glu Leu Lys Glu Val Lys Asp Lys Asn Ile Asp Asn Asn Asp Tyr Glu  
165 170 175  
Asn Lys Leu Lys Glu Lys Glu Asp Phe Val Lys Gln Lys Ile Asp Met  
180 185 190  
Leu Asn Glu Lys Glu Asn Leu Leu Gln Glu Lys Glu Leu Asp Ile Asn  
195 200 205

Lys Arg Glu Lys Lys Ile Asn Glu Lys Glu Lys Asn Ile Ile Lys Lys  
 210 215 220  
 Glu Glu Thr Phe His Asn Ile Glu Lys Glu Tyr Leu Glu Lys Asn Lys  
 225 230 235 240  
 Glu Arg Glu Thr Ile Ser Ile Glu Ile Ile Asp Ile Lys Lys His Leu  
 245 250 255  
 Glu Lys Leu Lys Ile Glu Ile Lys Glu Lys Lys Glu Asp Leu Glu Asn  
 260 265 270  
 Leu Asn Lys Lys Leu Leu Ser Lys Glu Asn Val Leu Lys Glu Leu Lys  
 275 280 285  
 Gly Cys Val Lys Glu Lys Asn Glu Thr Ile Asn Ser Leu Asn Asp Asn  
 290 295 300  
 Ile Ile Glu Lys Glu Lys Lys Tyr Lys Leu Leu Glu Tyr Glu Leu Glu  
 305 310 315 320  
 Glu Lys Asn Lys Gln Ile Asp Leu Leu Asn Lys Gln Glu Lys Glu Lys  
 325 330 335  
 Glu Lys Glu Lys Glu Arg Glu Lys Glu Lys Glu Arg Glu Lys Glu Lys  
 340 345 350  
 Glu Lys Glu Tyr Asp Thr Leu Ile Lys Glu Leu Lys Asp Glu Lys Ile  
 355 360 365  
 Ser Ile Leu Glu Lys Val His Ser Ile Lys Val Arg Glu Met Asp Ile  
 370 375 380  
 Glu Lys Arg Glu His Asn Phe Leu His Met Glu Asp Gln Leu Lys Asp  
 385 390 395 400  
 Leu Lys Asn Ser Phe Val Lys Asn Asn Asn Gln Leu Lys Val Tyr Lys  
 405 410 415  
 Cys Glu Ile Lys Asn Leu Lys Thr Glu Leu Glu Lys Lys Glu Lys Glu  
 420 425 430  
 Leu Lys Asp Ile Glu Asn Val Ser Lys Glu Glu Ile Asn Lys Leu Ile  
 435 440 445  
 Asn Gln Leu Asn Glu Lys Glu Lys Gln Ile Leu Ala Phe Asn Lys Asn  
 450 455 460  
 His Lys Glu Glu Ile His Gly Leu Lys Glu Glu Leu Lys Glu Ser Val  
 465 470 475 480  
 Lys Ile Thr Lys Ile Glu Thr Gln Glu Leu Gln Glu Met Val Asp Ile  
 485 490 495  
 Lys Gln Lys Glu Leu Asp Gln Leu Gln Glu Lys Tyr Asn Ala Gln Ile  
 500 505 510  
 Glu Ser Ile Ser Ile Glu Leu Ser Lys Lys Glu Lys Glu Tyr Asn Gln  
 515 520 525  
 Tyr Lys Asn Thr Tyr Ile Glu Glu Ile Asn Asn Leu Asn Glu Lys Leu  
 530 535 540  
 Glu Glu Thr Asn Lys Glu Tyr Thr Asn Leu Gln Asn Asn Tyr Thr Asn  
 545 550 555 560  
 Glu Ile Asn Met Leu Asn Asn Asp Ile His Met Leu Asn Gly Asn Ile  
 565 570 575

Lys Thr Met Asn Thr Gln Ile Ser Thr Leu Lys Asn Asp Val His Leu  
 580 585 590  
 Leu Asn Glu Gln Ile Asp Lys Leu Asn Asn Glu Lys Gly Thr Leu Asn  
 595 600 605  
 Ser Lys Ile Ser Glu Leu Asn Val Gln Ile Met Asp Leu Lys Glu Glu  
 610 615 620  
 Lys Asp Phe Leu Asn Asn Gln Ile Val Asp Leu Ser Asn Gln Ile Asp  
 625 630 635 640  
 Leu Leu Thr Arg Lys Met Glu Glu Lys Glu Asn Lys Met Leu Glu Gln  
 645 650 655  
 Glu Asn Lys Tyr Lys Gln Glu Met Glu Leu Leu Arg Gly Asn Ile Lys  
 660 665 670  
 Ser Ser Glu Asn Ile Leu Asn Asn Asp Glu Glu Val Cys Asp Leu Lys  
 675 680 685  
 Arg Lys Leu Ser Leu Lys Glu Ser Glu Met Lys Met Met Lys Glu Glu  
 690 695 700  
 His Asp Lys Lys Leu Ala Glu Leu Lys Asp Asp Cys Asp Val Arg Ile  
 705 710 715 720  
 Arg Glu Met Asn Glu Lys Asn Glu Asp Lys Ile Asn Met Leu Lys Glu  
 725 730 735  
 Glu Tyr Glu Asp Lys Ile Asn Thr Leu Lys Glu Gln Asn Glu Asp Lys  
 740 745 750  
 Ile Asn Thr Leu Lys Glu Gln Asn Glu Asp Lys Ile Asn Thr Leu Lys  
 755 760 765  
 Glu Glu Tyr Glu His Lys Ile Asn Thr Met Lys Glu Glu Tyr Glu His  
 770 775 780  
 Lys Ile Asn Thr Leu Asn Glu Gln Asn Glu His Lys Ile Asn Thr Leu  
 785 790 795 800  
 Asn Glu Gln Asn Glu His Lys Ile Asn Thr Met Lys Glu Glu Tyr Glu  
 805 810 815  
 Asp Lys Met Asn Thr Leu Asn Glu Gln Asn Glu Asp Lys Met Asn Ser  
 820 825 830  
 Leu Lys Glu Glu Tyr Glu Asn Lys Ile Asn Gln Ile Asn Ser Asn Asn  
 835 840 845  
 Glu Ile Lys Ile Lys Asp Val Val Asn Glu Tyr Ile Glu Glu Val Asp  
 850 855 860  
 Lys Leu Lys Val Thr Leu Asp Glu Lys Lys Lys Gln Phe Asp Lys Glu  
 865 870 875 880  
 Ile Asn Tyr Ala His Ile Lys Ala His Glu Lys Glu Gln Ile Leu Leu  
 885 890 895  
 Thr Glu Met Glu Glu Leu Lys Cys Gln Arg Asp Asn Lys Tyr Ser Asp  
 900 905 910  
 Leu Tyr Glu Lys Tyr Ile Lys Leu Ile Lys Ser Ile Cys Met Ile Ile  
 915 920 925  
 Asn Ile Glu Cys Cys Asp Asp Ile Glu Asn Glu Asp Ile Ile Arg Arg  
 930 935 940  
 Ile Glu Glu Tyr Ile Asn Asn Asn Lys Gly Leu Lys Lys Glu Val Glu



945	950	955	960
Glu Lys Glu His Lys Arg His Ser Ser Phe Asn Ile Leu Lys Ser Lys			
	965	970	975
Glu Lys Phe Phe Lys Asn Ser Ile Glu Asp Lys Ser His Glu Leu Lys			
	980	985	990
Lys Lys His Glu Lys Asp Leu Leu Ser Lys Asp Lys Glu Ile Glu Glu			
	995	1000	1005
Lys Asn Lys Lys Ile Lys Glu Leu Asn Asn Asp Ile Lys Lys Leu Gln			
	1010	1015	1020
Asp Glu Ile Leu Val Tyr Lys Lys Gln Ser Asn Ala Gln Gln Val Asp			
	1025	1030	1035
His Lys Lys Lys Ser Trp Ile Leu Leu Lys Asp Lys Ser Lys Glu Lys			
	1045	1050	1055
Ile Lys Asp Lys Glu Asn Gln Ile Asn Val Glu Lys Asn Glu Glu Lys			
	1060	1065	1070
Asp Leu Lys Lys Lys Asp Asp Glu Ile Arg Ile Leu Asn Glu Glu Leu			
	1075	1080	1085
Val Lys Tyr Lys Thr Ile Leu Tyr Asn Leu Lys Lys Asp Pro Leu Leu			
	1090	1095	1100
Gln Asn Gln Asp Leu Leu Ser Lys Ile Asp Ile Asn Ser Leu Thr Ile			
	1105	1110	1115
Asn Glu Gly Met Cys Val Asp Lys Ile Glu Glu His Ile Leu Asp Tyr			
	1125	1130	1135
Asp Glu Glu Ile Asn Lys Ser Arg Ser Asn Leu Phe Gln Leu Lys Asn			
	1140	1145	1150
Glu Ile Cys Ser Leu Thr Thr Glu Val Met Glu Leu Asn Asn Lys Lys			
	1155	1160	1165
Asn Glu Leu Ile Glu Glu Asn Asn Lys Leu Asn Leu Val Asp Gln Gly			
	1170	1175	1180
Lys Lys Lys Leu Lys Lys Asp Val Glu Lys Gln Lys Lys Glu Ile Glu			
	1185	1190	1195
Lys Leu Asn Lys Gln Leu Thr Lys Cys Asn Lys Gln Ile Asp Glu Leu			
	1205	1210	1215
Asn Glu Glu Val Glu Lys Leu Asn Asn Glu Asn Ile Glu Leu Ile Thr			
	1220	1225	1230
Tyr Ser Asn Asp Leu Asn Asn Lys Phe Asp Met Lys Glu Asn Asn Leu			
	1235	1240	1245
Met Met Lys Leu Asp Glu Asn Glu Asp Asn Ile Lys Lys Met Lys Ser			
	1250	1255	1260
Lys Ile Asp Asp Met Glu Lys Glu Ile Lys Tyr Arg Glu Asp Glu Lys			
	1265	1270	1275
Lys Arg Asn Leu Asn Glu Ile Asn Asn Leu Lys Lys Lys Asn Glu Asp			
	1285	1290	1295
Met Cys Ile Lys Tyr Asn Glu Met Asn Ile Lys Tyr Gly Asp Ile Cys			
	1300	1305	1310
Val Lys Tyr Glu Glu Met Ser Leu Thr Tyr Lys Glu Thr Ser Leu Lys			
	1315	1320	1325

Tyr Glu Gln Ile Lys Val Lys Tyr Asp Glu Lys Cys Ser Gln Tyr Asp  
 1330 1335 1340  
 Glu Ile Arg Phe Gln Tyr Asp Glu Lys Cys Phe Gln Tyr Asp Glu Ile  
 1345 1350 1355 1360  
 Asn Lys Lys Tyr Gly Ala Leu Leu Asn Ile Asn Ile Thr Asn Lys Met  
 1365 1370 1375  
 Val Asp Ser Lys Val Asp Arg Asn Asn Asn Glu Ile Ile Ser Val Asp  
 1380 1385 1390  
 Asn Lys Val Glu Gly Ile Ala Asn Tyr Leu Lys Gln Ile Phe Glu Leu  
 1395 1400 1405  
 Asn Glu Glu Ile Ile Arg Leu Lys Gly Glu Ile Asn Lys Ile Ser Leu  
 1410 1415 1420  
 Leu Tyr Ser Asn Glu Leu Asn Glu Lys Asn Ser Tyr Asp Ile Asn Met  
 1425 1430 1435 1440  
 Lys His Ile Gln Glu Gln Leu Leu Phe Leu Glu Lys Thr Asn Lys Glu  
 1445 1450 1455  
 Asn Glu Glu Lys Ile Ile Asn Leu Thr Ser Gln Tyr Ser Asp Ala Tyr  
 1460 1465 1470  
 Lys Lys Lys Ser Asp Glu Ser Lys Leu Cys Gly Ala Gln Phe Val Asp  
 1475 1480 1485  
 Asp Val Asn Ile Tyr Gly Asn Ile Ser Asn Asn Asn Ile Arg Thr Asn  
 1490 1495 1500  
 Glu Tyr Lys Tyr Glu Glu Met Phe Asp Thr Asn Ile Glu Glu Lys Asn  
 1505 1510 1515 1520  
 Gly Met His Leu Ser Lys Tyr Ile His Leu Leu Glu Glu Asn Lys Phe  
 1525 1530 1535  
 Arg Cys Met Lys Ile Ile Tyr Glu Asn Glu Asn Ile Lys Ser Ser Asn  
 1540 1545 1550  
 Lys Ile Ile Gly Leu Tyr Asn Tyr Ser Arg Tyr Tyr Gly Leu Arg Glu  
 1555 1560 1565  
 Asp Leu Cys Lys Glu Glu Ile Val Pro Ser Lys Ile Gly Asn Ile Ser  
 1570 1575 1580  
 Asn Lys Asn Glu Asn Asn Asn Lys Lys Asn Asn Thr Cys Asp Gly Tyr  
 1585 1590 1595 1600  
 Asp Glu Lys Val Thr Ile Val Leu Cys Ile Ile Leu Asn Glu Ile Ile  
 1605 1610 1615  
 Lys Phe Leu Phe Leu Asn Asp Glu Tyr Val Leu Leu Phe Glu Lys Ile  
 1620 1625 1630  
 His Lys Asn Val Trp Lys Arg Met Tyr Ile Pro Glu Glu Ile Lys Phe  
 1635 1640 1645  
 Phe Ile Leu Lys Tyr Ile Thr Leu Leu Asn Asn Leu Arg Asp Tyr Ile  
 1650 1655 1660  
 Ile Ser Val His Asn Asn Met Lys Asn Glu Lys Tyr Asp Glu Cys Trp  
 1665 1670 1675 1680  
 Phe Leu Phe Gln His Tyr Phe Glu Arg Ser Ser Asp Val Arg Lys Glu  
 1685 1690 1695

Met Val His Phe Leu Leu Glu Arg Lys Ser Gln Glu Asn Leu Ile Ser  
 1700 1705 1710

Phe Lys Ser Lys Leu Lys Ser Lys Lys Glu Lys Ile Leu Thr Met Asp  
 1715 1720 1725

Ile Leu Asn Phe Ser Lys Glu His Met Gln Leu Lys Thr Ile Ala His  
 1730 1735 1740

Leu Arg Lys Glu Ile Asn Tyr Glu Lys Leu Ser Lys Asp Thr Leu Asn  
 1745 1750 1755 1760

Arg Asp Tyr Asn Leu Leu Leu Tyr Lys Tyr Gln Glu Cys Val Ser Lys  
 1765 1770 1775

Leu Lys Arg Val Lys Asn Leu Met Lys Glu Ile Asn Gln Asn Val Phe  
 1780 1785 1790

Ile Glu Lys Tyr Asp Asp Ile Ser Lys Glu Leu Asp Asn Phe Ser Asp  
 1795 1800 1805

Gly Tyr Asn Glu Gln Asn Glu Gln His Val Met Asp Pro Ile Leu Leu  
 1810 1815 1820

Asn Asn Asn Lys Asn Lys Asn Asn Lys Leu Ile Thr Glu His Asn Asn  
 1825 1830 1835 1840

Pro Ile Ile Asn Arg Leu Thr Asn Phe Thr Gln Asn Arg Asp Ser Lys  
 1845 1850 1855

Tyr Lys Asn Lys Ile Met Asp Asp Val Lys Gln Arg Lys Ile Asn Ser  
 1860 1865 1870

Thr Met Asn Asn Thr Asn Lys Asn Gly Ile Asn Ile Ile Tyr Asn His  
 1875 1880 1885

Tyr Glu Asn Leu Asn Lys Pro Asn Tyr Asn Asp Asn Ile Asn Arg Leu  
 1890 1895 1900

Asn Ser Tyr His Gln Asn Ile His Ile Ala Asn Ser Ile His Pro Asn  
 1905 1910 1915 1920

Arg Asn Gln Asn Lys Ser Phe Leu Thr Asn Gln Ala Asn Ser Thr Tyr  
 1925 1930 1935

Ser Val Met Lys Asn Tyr Ile Asn Ser Asp Lys Pro Asn Leu Asn Gly  
 1940 1945 1950

Lys Lys Ser Val Arg Asn Ile Phe Asn Glu Ile Val Asp Glu Asn Val  
 1955 1960 1965

Asn Lys Thr Phe Val His Lys Ser Val Phe Phe  
 1970 1975

<210> 29  
 <211> 2485  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 29  
 Met Phe Ser Val Glu Leu Glu Asn Arg Ser Gly Tyr Lys Lys Arg Lys  
 1 5 10 15

Lys Lys Lys Trp Asn Asn Lys Ser Thr Gly Gln Asp Lys Phe Thr Asn  
 20 25 30

Lys Asp Ile Ile Ser Glu Glu Lys Glu Glu Gly Leu Asp Ile Glu Cys  
 35 40 45

Gly His Asn Ile Leu Gly Asp Val Gln Tyr Asp Gly Thr Tyr Asn Ile  
 50 55 60  
 Asn Glu Gln Val Lys Lys Asn Ser Leu Phe Tyr Phe Lys Cys Lys Glu  
 65 70 75 80  
 Glu Ile Asn Leu Lys Asp Gly Asn Ile Ile Leu Asp Asp Lys Asn Arg  
 85 90 95  
 Lys Val Asp Asp Ile Asn Ile Thr Gly Asp Asp Lys Asn Ile Lys Val  
 100 105 110  
 Asp Asp Lys Asn Ile Lys Val Asp Asp Lys Asn Ile Thr Gly Glu Asp  
 115 120 125  
 Lys Asn Ile Thr Gly Glu Asp Lys Asn Ile Thr Gly Asp Asp Lys Asn  
 130 135 140  
 Ile Ile Phe Asp Val Asp Glu Ile Leu Ile His Gln His Asn Thr Ser  
 145 150 155 160  
 Asn Ser Asn Ile Tyr Ile Asn Cys Asn Asp Asn Asn Asn Asp Ile Arg  
 165 170 175  
 Asn Ser Ser Asn Val Gln His Tyr Tyr Asn Asp Lys Ile Lys Glu Asn  
 180 185 190  
 Ile Asn Lys Gln Asn Lys Lys Tyr Val Leu Ile Asn Asp Tyr Ile Asn  
 195 200 205  
 Asn Lys Tyr Ile Leu Ser Lys Asn Lys Thr Cys Lys Ile Asn Lys Gly  
 210 215 220  
 Lys Lys Leu Ile Lys Lys Lys Lys Val Asn Asn Ile Ser Arg Arg Arg  
 225 230 235 240  
 Asn His Ile Leu Tyr Lys Cys Arg Asn Lys Leu Tyr Asn Gly Asn Val  
 245 250 255  
 Phe Ser Asp Asp Ile Ile Lys Ser Glu Val Asn Val Cys Asn Ser Leu  
 260 265 270  
 Thr Val Leu His Lys Asn Tyr Asn Ile Asn Met Asp Asn Tyr Leu Asp  
 275 280 285  
 Asp Asn Ile His Thr Asn Asn Ser Asn Ile Tyr Asp Ile Asn Tyr Thr  
 290 295 300  
 Asn Glu Asn Val Ile Asn Ser Thr Cys Arg Tyr Tyr Pro Ile Gly Asn  
 305 310 315 320  
 Asn Asn Thr Leu Ser Lys Asp Glu Val Thr Lys Ser Ser Ser Lys Ile  
 325 330 335  
 Asn Ser Leu Ser Tyr Phe Asp Asp Ile Ile Asn Val Asn Lys Asn Asp  
 340 345 350  
 Ile Pro Ile Leu His Asp Lys Glu Asn Ile Asn Ile Ile Ser Asn Lys  
 355 360 365  
 Glu Ser Cys His Lys Asp Glu Lys Glu Glu Glu Lys Tyr Ile Met Tyr  
 370 375 380  
 Asn Ser Asn Leu Val Glu Glu Lys Lys Gln Lys Lys Met Ile Trp Asn  
 385 390 395 400  
 Ser Leu Asn Val Leu Pro Ile Asp Ile Leu Leu Lys Asn Gly His Asp  
 405 410 415  
 Glu Ile Asn Lys Glu Ile Cys Lys Lys Lys Lys Lys Ser Phe Phe Ser

420										425					430				
Gln	Asn	Asp	Ile	Lys	Ser	Lys	Met	Leu	Tyr	Asn	Asn	Lys	Ser	Tyr	Ser				
		435					440					445							
Lys	Ser	Glu	Lys	Val	Leu	Tyr	Thr	Asn	Asn	Lys	Asn	Ser	Asn	Thr	Phe				
		450				455					460								
Ile	Pro	Ile	Phe	Phe	Leu	Asn	Lys	Val	Gly	Asp	Lys	Phe	Lys	Asn	Ser				
465					470					475					480				
Glu	Asn	Ile	Tyr	Asp	Met	Tyr	Asn	Asn	Lys	Lys	Asn	Val	Tyr	Ile	His				
				485					490					495					
Asp	Lys	Lys	Ile	Tyr	Thr	Asn	Met	Tyr	Ser	Asn	Lys	Leu	Lys	Gln	Lys				
			500					505					510						
His	Tyr	Tyr	Ser	Thr	Ser	Asn	Ile	Asn	Leu	Leu	Tyr	Asn	Asn	Ile	Gly				
		515					520					525							
Lys	Val	Leu	Asp	Asn	Gly	Leu	His	Leu	Ser	Asn	Asn	Met	Tyr	Cys	Arg				
	530					535					540								
Leu	Asn	Ser	Asn	Pro	Pro	Tyr	Lys	Ser	Ile	Ser	Leu	Ile	Asn	Asn	Asn				
545					550					555									
Val	Phe	Phe	Tyr	Lys	Lys	Arg	Lys	Ser	Asn	Ser	Asn	Asn	Asn	Asn	Asn				
				565					570					575					
Asn	Asn	Asn	Ile	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Lys	Lys	Asn	His				
			580					585					590						
Val	Ile	Ile	Asn	Lys	Lys	Ile	Ser	Ser	Tyr	Asn	Ile	His	Tyr	Lys	Glu				
		595					600					605							
Arg	Lys	Asp	Ser	Phe	Lys	Glu	Asn	Phe	Leu	Phe	Phe	Lys	Glu	Lys	Ile				
	610					615					620								
Leu	Pro	Ser	Lys	Lys	Asp	Thr	Cys	Val	Phe	Asn	Glu	Arg	Gln	Lys	Asp				
625					630					635					640				
Leu	Phe	Glu	Lys	Ser	Asn	Glu	His	Ile	Lys	Cys	Val	Ser	Ser	Phe	Asn				
				645					650					655					
Asn	Thr	Ser	Asp	Asp	Ile	Ser	Ser	His	Ser	Ser	Val	Asn	Lys	Lys	Glu				
			660					665					670						
Pro	Phe	Phe	Ala	Leu	Lys	Asn	Asn	Ser	Ile	Arg	His	Ile	Pro	Lys	Glu				
		675				680						685							
Asn	Asn	Ile	Ile	Tyr	Thr	Ser	Gly	Lys	Ser	Phe	Asn	His	Val	Gln	Asp				
	690					695					700								
Lys	Glu	Lys	Thr	Val	Leu	Leu	Lys	Lys	Lys	Lys	Glu	Ile	Asn	Asp	Lys				
705					710					715					720				
Asn	Thr	Phe	Ser	Ser	Cys	Leu	Ile	Asn	His	Asn	Ile	Thr	Thr	Tyr	Thr				
				725					730					735					
Leu	Gln	Asn	Gly	Val	Asn	Lys	Asn	Leu	Asn	Met	Leu	Gly	Ile	Arg	Asp				
			740					745					750						
Ser	Ile	Tyr	Lys	Ile	Asp	Glu	Lys	Asn	Asn	Met	Leu	Lys	Glu	Cys	Tyr				
		755					760					765							
Asn	Gly	Asn	Asn	Asp	Ser	Asn	Asn	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys				
	770					775						780							
Leu	Ser	Phe	Ser	Cys	Asp	Ile	Ile	Asn	Asp	Asn	Ile	Thr	Pro	Tyr	Glu				
785					790					795					800				

Ser Asp Lys Glu Lys Asn Asn Ser Asn Asn Ile Lys Ser Met Asp Ile  
 805 810 815  
 Phe Asn Tyr Val Lys Arg Lys Ser Asn Leu Tyr Asn Asn Leu Ser Ser  
 820 825 830  
 Asn Arg Asp Ser Thr Val Asp Met His Asn Lys Tyr Asn Ser Glu Glu  
 835 840 845  
 Tyr Ile Asn Ile Gln Arg Thr Asn Lys Ile Tyr Glu Leu Ser Asn Lys  
 850 855 860  
 Arg Ile Arg Asn Tyr Lys Leu Tyr Ser Met Asp Glu Ile Phe Lys Val  
 865 870 875 880  
 Ser Leu Lys Glu Lys Lys Tyr Ile Asp Asn Ile Ser Asn Asn Met Glu  
 885 890 895  
 Arg Val Thr Tyr Lys Asn Glu Met Ile Asn Glu Lys Ile Ser Lys Met  
 900 905 910  
 Asp Asp Ile Leu Tyr Pro Cys Asp Lys Asn Lys Ser Leu Asn Met Ser  
 915 920 925  
 Cys Pro Val Ile Ile Glu Asn Asn Ile Ser Arg Glu Glu Asn Glu Lys  
 930 935 940  
 Asn Ser Ser Val Ile Leu Asn Lys Lys Lys Asn Glu Asn Met Phe Asn  
 945 950 955 960  
 Cys Val Gly Arg Leu His Cys His Met Gly Lys Met Asn Asn Gln Asp  
 965 970 975  
 Asn Ile Tyr Asp Gln Gly Asn Ile Lys Lys Asn Glu Glu Glu Ile Thr  
 980 985 990  
 Lys His Asp Glu Tyr Ile Ser Arg Glu Glu Lys Asn Lys Tyr Asn Ser  
 995 1000 1005  
 Lys Cys Ile Arg Asn Phe Asp Asp Tyr Lys Tyr Glu Gln Val Leu Ser  
 1010 1015 1020  
 Tyr His Thr Leu Asp Glu Asp Lys Lys Lys Asn Asp Met Asn Asn Leu  
 1025 1030 1035 1040  
 Ile Asp Met Asn Asn Glu Ala Ile Ile Glu Thr Val Asn Gly Val Ile  
 1045 1050 1055  
 Asn Asn Ile Ile Leu Asp Arg Lys Asp Asn Asn Ser Arg Lys Asp Met  
 1060 1065 1070  
 Glu Lys Glu Met Glu Lys Glu Met Glu Lys Lys Met Glu Lys Glu Met  
 1075 1080 1085  
 Glu Lys Val Met Glu Lys Glu Met Glu Lys Val Met Glu Lys Glu Val  
 1090 1095 1100  
 Glu Lys Glu Leu Lys Asn Glu Met Asn Asn Arg Met Asn Asn Arg Met  
 1105 1110 1115 1120  
 Asn Asn Glu Met Lys Asn Glu Ile Asn Ile Tyr Lys Asn Asn Glu Ile  
 1125 1130 1135  
 Tyr Val Asp Asn Asp Lys Glu Leu Glu Ile Val Asn Glu Glu Lys Lys  
 1140 1145 1150  
 Leu Ile Tyr Pro Phe Asn Tyr Glu Ser Asp Val His Lys Asn Met Asn  
 1155 1160 1165

Met Ser Ile Asn Ile Asn Asn Cys Lys Asp Asp Tyr Asn Asn Ile Leu  
1170 1175 1180

Lys Glu Tyr Val Asp Asn Ser Cys Leu Ala Gln Lys Glu Glu Asn Ile  
1185 1190 1195 1200

Phe Arg Pro Leu Phe Asn Leu Asn Lys Lys Asp Lys Val Trp Lys Arg  
1205 1210 1215

Phe Asn Ile Lys Asn Asn Ile Lys Thr Ile Ile His Asn Glu Glu Met  
1220 1225 1230

Lys Arg Ile Tyr Gln Thr Ile Asn Lys Asn Val Phe Pro Ile Tyr Asn  
1235 1240 1245

Phe Asn Arg Tyr Glu Asn Phe Leu Ile Asn His Leu Thr Tyr Asn Phe  
1250 1255 1260

Pro Lys Asn Asp Leu Phe Lys Leu Ser Tyr Lys Val Ser Met Asn Asn  
1265 1270 1275 1280

Ile Arg Asn Leu Tyr Ile Ala Asn Lys His Ile Asn Asn Asn Tyr Asp  
1285 1290 1295

Tyr Met Asn Lys Leu Tyr Asn Gln Asn Ile Tyr Thr Leu Lys Tyr Gln  
1300 1305 1310

Val Ala Asn Ile Asp Asn Asp His His Ile Cys Lys Lys Gly Gly Gly  
1315 1320 1325

Leu Asp Tyr Ile Asn Met Asn Ile Ser Lys Glu Cys Lys Asn Arg Lys  
1330 1335 1340

Asp Lys Thr Tyr Leu Asn Lys Ile Phe His Tyr Lys Lys Lys Lys Asp  
1345 1350 1355 1360

Ala Arg Phe Phe Ile Asn Asp Glu Ile Gly Ser Asn Asp Tyr Met Tyr  
1365 1370 1375

Asp Ile Lys Lys Lys Tyr Ser Asn Asp Glu Asn Asn Tyr Lys Leu Asn  
1380 1385 1390

Glu Lys Met Asn Ile Ser Met Ser Asn Asp Glu Asp Met Ile Pro Thr  
1395 1400 1405

Leu Asn Ser Glu His Gly Asn Asn Phe Pro Ser Cys Gln Pro Asn Leu  
1410 1415 1420

Leu Glu Lys Lys Ser Thr Tyr Ile Asp Leu Asn Leu Tyr Asp Ser Asn  
1425 1430 1435 1440

Ser Met Asp Asp Phe Thr Glu Glu Lys Tyr Asn Phe Val Asn Asn Glu  
1445 1450 1455

Asn Asp Leu Phe Asn Thr Lys Arg Trp Lys Phe Asn Phe Ser Lys Gly  
1460 1465 1470

Lys Asn Leu Phe Asn Asn Lys Phe Phe Asn Val Ser Asn Glu Asp Gly  
1475 1480 1485

Val Phe Ser Phe Phe Lys Asn Met Asn Leu Phe Arg Glu Leu Asn Lys  
1490 1495 1500

Ser Asn Asn Ser Leu Lys Leu Glu Ser Val Lys Asn Ser Asn Asn Asn  
1505 1510 1515 1520

Cys Ser Asn Asn Lys Gly Asp Asp Asn Ile Gly Asn Met Glu Asn Met  
1525 1530 1535

Asn Thr Thr Asn Val Thr Ile Ala Ser Asp Glu His Ile Ser Thr Lys

52



Glu Asn Val Asp Phe Phe Asn His Ser Phe Phe Glu Asn Leu Asn Leu  
 1925 1930 1935  
 Glu Asn Lys Lys Lys Gly Tyr Ile Asp Glu Thr Asn Val Asn Glu Asn  
 1940 1945 1950  
 Tyr Glu Ser Asp Asn Glu Tyr Asp Ser Asp Glu Asp Asp Thr Glu Ser  
 1955 1960 1965  
 Asp Asn Asp Asp Glu Gln Asn Lys Glu Asn Glu Arg Gly Asp Glu Lys  
 1970 1975 1980  
 Asp Gly Tyr Glu Glu Met Asn Gly Gly Asp Lys Asn Glu Glu Met Asn  
 1985 1990 1995 2000  
 Gly Gly Asp Lys Asn Glu Glu Met Asn Val Gly Asp Lys Asn Gly Gly  
 2005 2010 2015  
 Ile Asn Glu Glu His Lys Asn Glu Gly Ile Asn Glu Glu His Lys Asp  
 2020 2025 2030  
 Glu Leu Ile Asn Lys Glu His Lys Asn Glu Arg Ile Asn Glu Glu His  
 2035 2040 2045  
 Lys Asn Glu Arg Ile Asn Glu Glu His Lys Asn Glu Gly Ile Asn Glu  
 2050 2055 2060  
 Glu His Lys Asn Glu Gly Ile Asn Glu Glu His Lys Asn Glu Arg Ile  
 2065 2070 2075 2080  
 Asn Glu Glu His Lys Asn Glu Gly Ile Asn Lys Leu Thr Tyr His Asn  
 2085 2090 2095  
 Met Asn Lys Asn Asn Ile Ser Asn Glu Asn Asn Tyr Asn Asp Asp Asp  
 2100 2105 2110  
 Ser Tyr Asp Glu Asp Asn Leu Val Ser Leu Lys Ile Ile Asn Leu Lys  
 2115 2120 2125  
 Tyr Leu Ser Lys Lys Asn Ser Leu Lys Asn Ile Leu Arg Glu Val Asn  
 2130 2135 2140  
 Phe Leu Lys Met Cys Glu His Pro Asn Val Val Lys Tyr Phe Glu Ser  
 2145 2150 2155 2160  
 Phe Phe Trp Pro Pro Cys Tyr Leu Val Ile Val Cys Glu Tyr Leu Ser  
 2165 2170 2175  
 Gly Gly Thr Leu Tyr Asp Leu Tyr Lys Asn Tyr Gly Arg Ile Ser Glu  
 2180 2185 2190  
 Asp Leu Leu Val Tyr Ile Leu Asp Asp Val Leu Asn Gly Leu Asn Tyr  
 2195 2200 2205  
 Leu His Asn Glu Cys Ser Ser Pro Leu Ile His Arg Asp Ile Lys Pro  
 2210 2215 2220  
 Thr Asn Ile Val Leu Ser Lys Asp Gly Ile Ala Lys Ile Ile Asp Phe  
 2225 2230 2235 2240  
 Gly Ser Cys Glu Glu Leu Lys Asn Ser Asp Gln Ser Lys Glu Leu Val  
 2245 2250 2255  
 Gly Thr Ile Tyr Tyr Ile Ser Pro Glu Ile Leu Met Arg Thr Asn Tyr  
 2260 2265 2270  
 Asp Cys Ser Ser Asp Ile Trp Ser Leu Gly Ile Thr Ile Tyr Glu Ile  
 2275 2280 2285

Val Leu Cys Thr Leu Pro Trp Lys Arg Asn Gln Ser Phe Glu Asn Tyr  
 2290 2295 2300  
 Ile Lys Thr Ile Ile Asn Ser Ser Pro Lys Ile Asn Ile Thr Glu Gly  
 2305 2310 2315 2320  
 Tyr Ser Lys His Leu Cys Tyr Phe Val Glu Lys Cys Leu Gln Lys Lys  
 2325 2330 2335  
 Pro Glu Asn Arg Gly Asn Val Lys Asp Leu Leu Asn His Lys Phe Leu  
 2340 2345 2350  
 Ile Lys Lys Arg Tyr Ile Lys Lys Lys Pro Ser Ser Ile Tyr Glu Ile  
 2355 2360 2365  
 Arg Asp Ile Leu Lys Ile Tyr Asn Gly Lys Gly Lys Thr Asn Ile Phe  
 2370 2375 2380  
 Arg Asn Phe Phe Lys Asn Leu Phe Phe Phe Asn Asp Lys Asn Lys Lys  
 2385 2390 2395 2400  
 Lys Lys Pro Asn Lys Met Ile Ser Ser Lys Ser Cys Asp Ala Glu Met  
 2405 2410 2415  
 Phe Phe Glu Gln Leu Lys Arg Glu Asn Phe Asp Phe Phe Glu Ile Lys  
 2420 2425 2430  
 Leu Lys Asp Asp Glu Asn Ser Arg Ser Leu Asn Thr Phe Asn Ile Asn  
 2435 2440 2445  
 Ile Ser Lys Glu Arg Asp Asp Ile Ser Tyr Ser Ser Leu Asn Leu Glu  
 2450 2455 2460  
 Lys Ile Lys Glu His Ser Leu Asn Met Val Ala Ser Val Val Gly Thr  
 2465 2470 2475 2480  
 Glu Gln Ser Gln Lys  
 2485

<210> 30  
 <211> 507  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 30  
 Met Lys Thr Thr Lys Glu Asn Asp Asn Asn Asn Ile Val His Tyr Val  
 1 5 10 15  
 Asp Trp Ile Asn Gln Ile Phe Lys Lys Asn Ser Leu Gln Cys Asp Leu  
 20 25 30  
 Tyr Phe Leu Asp Asp Asn Lys Glu Lys Asp Val Ser Lys Lys Arg Lys  
 35 40 45  
 Ala Gln Leu Lys Asp Glu Tyr Asp Asn Ile Ser Arg Ser Lys Glu Asn  
 50 55 60  
 Ile Asn Asn Ser Lys Lys Ile Lys Asn Glu Leu Ser Ile Lys Asp Asn  
 65 70 75 80  
 Met His Asp Tyr Ile Tyr Asp Asp Arg Ile Tyr Asn Asn Asp Lys Glu  
 85 90 95  
 Lys Asn Val Ile Lys Ser Asp Asn Lys Asn Val Ile Lys Ser Asp Asn  
 100 105 110  
 Lys Asn Val Ile Lys Ser Asp Asn Lys Asn Val Ile Lys Ser Asp Asn  
 115 120 125

Lys Asn Val Ile Lys Ser Asp Asn Lys Asn Val Ile Lys Ser Asp Asn  
 130 135 140  
 Lys Asn Val Ile Lys Ser Asp Tyr Lys Ser Asp Asp Arg Asn Ala Cys  
 145 150 155 160  
 Asp Ile Tyr Lys Ser Asn Lys Lys Asn Val Pro Asp Asn Cys His Ile  
 165 170 175  
 Tyr Asp Asp Asn Ser Ser Val Glu Asn Leu Asp Gly Lys Asn Lys Leu  
 180 185 190  
 Asn Asn Ile Arg Asn Ile His Asn Asp Asn Ser Ser Ser Cys Asp Ile  
 195 200 205  
 Ser Asp Ile Lys Ser Glu Asp Glu Tyr Ile Glu Pro Tyr Glu Lys Lys  
 210 215 220  
 Asn Glu Glu Asn Ile Asn Glu Tyr Lys Asn Lys Lys Asn Ile Ala Asn  
 225 230 235 240  
 Glu Asn Ile Lys Glu Gly Lys Ser Ser Ile Tyr Asn Asp Glu His Asn  
 245 250 255  
 Tyr Asn Ser Leu Leu Tyr Asn Ser Cys Asn Gly Glu Ile Ser Lys Ile  
 260 265 270  
 Asn Lys Ile Ser Ser His Asn Asn Ile Asp Asn Asn Met Asp Asn Tyr  
 275 280 285  
 Asn Thr Phe Ala Asn Val Asn Asn Phe Ile Ile Tyr Ser Ser Asp Asp  
 290 295 300  
 Glu Asp Asn Ile Ser Asn Tyr Tyr Asn Gly Lys Asp Val Leu Asn Asp  
 305 310 315 320  
 Glu Ile Met Phe Pro Ile Lys Phe Asn Phe Glu Lys Leu Lys Lys Asn  
 325 330 335  
 Ile Tyr Val Ile Glu His Ile Asp Lys Ile Tyr Tyr Asp Thr Phe Leu  
 340 345 350  
 Asn Lys Asn Pro Ser Glu Lys Ser Val Phe Met Asn Asp Glu Ser Thr  
 355 360 365  
 Gly Tyr Leu Lys Asn Asp Val Asn Asp Lys Cys Val Val Asp Asn Ile  
 370 375 380  
 Asn Val Ile Asn Pro Ser Ser Val Asn Thr Leu Ser Asn Ile Ser Asn  
 385 390 395 400  
 Ile Arg Asn Glu Lys Ile Glu Asn Asn Asn Lys Asn Glu Lys Leu Ile  
 405 410 415  
 Lys Ser Tyr Pro Thr Gln Ser Lys Asn Val Met Ser Thr Phe Ser Phe  
 420 425 430  
 Trp Asn Ile Glu Lys Glu Thr Phe Ile Thr Lys Pro Leu Tyr Ala Gln  
 435 440 445  
 Asn Leu Arg Lys Lys Gln Phe Ser Leu Leu Asp Glu Ser Glu Glu Met  
 450 455 460  
 Ile Arg Asn Tyr Ser Ser Asn Gln Tyr Ser Ile Lys Phe Val Pro Arg  
 465 470 475 480  
 His Leu Leu Tyr Val Met Ser Gln Val Ala Ser Arg Ser Phe Phe Asp  
 485 490 495  
 Pro Leu Tyr Arg Lys Gln Leu Phe Phe Arg Tyr

500

505

<210> 31  
 <211> 242  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 31  
 Met Val Ser Asp Lys Glu Asp Gln Cys Asn Lys Ile Asn Asn Asn Asp  
 1 5 10 15  
 Asn Val Thr Ser Leu Glu Ser Ile Asn Glu Glu Lys Lys Asn Asn Thr  
 20 25 30  
 Asn Glu Gly Gly Glu Ser Phe Phe Asp Asn Asn Ala Glu Gln Tyr Leu  
 35 40 45  
 Ile Ile Ser Leu Arg Gln Lys Leu Asn Pro Val Ile Lys Lys Ile Lys  
 50 55 60  
 Arg Val Arg Tyr Lys Phe Asn Asn Ile Ile Pro Asp Phe Leu Val Gly  
 65 70 75 80  
 Lys Asn Asn Ala Cys Leu Phe Ile Ser Met Lys Tyr His Arg Leu Arg  
 85 90 95  
 Ser Asn Tyr Leu Lys Ala Arg Ile Glu Thr Leu Ser Asn Lys Tyr Asn  
 100 105 110  
 Asn Arg Ile Leu Leu Cys Leu Val Asp Met Glu Asn Ile Glu Asn Ser  
 115 120 125  
 Leu Gly Glu Ile Asn Gln Leu Ser Phe Ser Phe Asn Met Thr Leu Ile  
 130 135 140  
 Leu Cys Trp Ser Asn Glu Glu Cys Ala Arg Val Ile Glu Asp Phe Arg  
 145 150 155 160  
 Ile Tyr Glu Lys Lys Ile Ser Tyr Ile Ile Lys Lys Lys Ile Ser Ser  
 165 170 175  
 Ser Asn Gln Glu Glu Lys Ile His Glu Leu Leu Lys Lys Ile Arg Cys  
 180 185 190  
 Ile His Thr Thr Asp Cys Ile Thr Leu Thr Thr Lys Phe Lys Asn Phe  
 195 200 205  
 Lys Asn Ile Ile Gln Ala Lys Lys Glu Asp Leu Ile Ser Cys Ser Gly  
 210 215 220  
 Leu Gly Ile Lys Lys Ile Gln Ala Leu Met Ala Thr Phe Asn Asp Pro  
 225 230 235 240  
 Phe Phe

<210> 32  
 <211> 23  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 32  
 Gly Ser Val Val Trp Leu Ala Leu Gln Thr Leu Thr Leu Gln Thr Trp  
 1 5 10 15  
 Val Gln Ile Pro Ala Glu Pro  
 20

<210> 33  
 <211> 635  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 33

```

Met Ser Leu Tyr Met Asn Ile Phe Glu Gln Ile Glu Ile Ile Leu Glu
 1          5          10          15

Lys Cys Asn Asn Glu Thr Phe Ile Lys Ile Asn Thr Leu Ile Asp His
          20          25          30

Ile Ile Arg Asn Tyr Ala Asn Glu Asn Met Lys Glu Ile His Glu Arg
          35          40          45

Lys Lys Gly Asn Asp Asn Asn Asn Lys Lys Lys Lys Lys Lys Lys
 50          55          60

Glu Asn Asn Thr Asn Thr Ile Arg Asn Tyr Phe Asn Leu Val Asp Lys
 65          70          75          80

Glu Asn Asn Leu Lys Asn Asn Asn Asn Asn Asp Asp Gly Val Thr Asn
          85          90          95

Val Met Glu Gln Asp Lys Asn Lys Asp Cys Leu Leu Ser Leu Thr Ile
          100          105          110

Lys Asn Asn Asn Asn Asn Lys Thr Ile Ile Asn Met Phe Phe Phe Phe
          115          120          125

Gly His Phe Asn Ile Met Ile Ile Ile Tyr Tyr Val Ile Tyr Lys Leu
          130          135          140

Lys Met Phe Asp Lys Asp Leu Phe Ile His Glu Lys Asn Ser Asn Ile
          145          150          155          160

His Thr Asn Gln Ser Tyr Thr Ala Asp Ser Ile Ser Asp Asp Leu Asn
          165          170          175

Lys Val Gly Ser Asp Asn Asn Arg Asn Lys Asn Ile Ile Met Arg His
          180          185          190

Thr Asn Ile Asn Asn Lys Glu His Tyr Leu Gln Lys Lys Tyr Asn Ile
          195          200          205

Gln Asp Asp Glu Glu Glu Asp Asn Glu Thr Ile Arg Ser Asp Ser Lys
          210          215          220

Leu Arg Asp Ile Tyr Ser Asp Ser Gln Ser Lys Asp Ile Met Met Ser
          225          230          235          240

Ser Ser Pro Asn Lys Glu Glu Glu Ser Met Ser Ser Asp Asn His Asn
          245          250          255

Lys Asp Ile Asn Ser Ser Asp Asn Gln Asn Lys Asp Ile Asn Ser Ser
          260          265          270

Asp His Asn Met Asn Asp Ser Thr Asn Glu Ser Thr Thr Thr Ser Leu
          275          280          285

Ser Thr Ser Ile Asn Asn Thr Asn Arg Asn Lys Lys Asn Arg Lys Lys
          290          295          300

Asn Asn Ile Asn Ile Asn Asn Asn Asn Asn Asn Ser Asn Asn Ile Asn
          305          310          315          320

Ser Ser Ser Asn Asn Asn Ser Gly Val Tyr His Tyr Leu Pro Ser Gln
          325          330          335

```

Lys Tyr Asn Asn Lys Tyr Asn Thr Tyr Asn Asn Lys Asp His Ile Ile  
 340 345 350  
 Tyr His Asn Lys Cys Ile Thr His Ile Leu Cys Ser Gln Leu Met Tyr  
 355 360 365  
 Leu Asp Met Asn Ser Phe Asn Gln Ala Ile Gln Asp Ile Val Lys Thr  
 370 375 380  
 Asn Lys Tyr Lys Leu Leu Arg Ile Ile Ile Leu Glu Ala Phe Asp Ser  
 385 390 395 400  
 Leu Asn Glu Tyr Tyr Arg Lys Asn Phe Leu Asn Lys Leu Lys Lys Cys  
 405 410 415  
 Asn Val Leu Ile Phe Ile His Ser Thr His Ala Leu Asn Asp Thr Phe  
 420 425 430  
 Leu His Asn Cys Leu Tyr Ile Arg Ile Pro Lys Pro Asp Lys Ile Leu  
 435 440 445  
 Phe Asn Asn His Ile Leu Asp Phe Leu Lys Thr Asn Tyr Lys Ile Asn  
 450 455 460  
 Asn Leu Asn Asn Gln Lys Lys Gln Tyr Ile Ile Asn Val Leu Asn Tyr  
 465 470 475 480  
 Cys Asn Phe Asp Ile Pro Leu Ile Leu Ala Leu Leu Tyr Ile Ile Gln  
 485 490 495  
 Leu His Lys Phe Pro Asp Ile Lys Lys Ile Ile Lys Leu Ile Ile Asn  
 500 505 510  
 Ser Asn Ile Lys Lys Leu Ile Asn Val Ile His Lys Cys Ile Ile Ser  
 515 520 525  
 Asn Asn Ser Phe Phe Val Ile Arg Asn Ile Leu Tyr Asn Ile Leu Tyr  
 530 535 540  
 Thr Tyr Asn Phe His Leu His Asn Phe Leu Asn Thr Phe Cys Lys Glu  
 545 550 555 560  
 Leu Ala Ala Tyr His Lys Asn Asp Asn Asn Tyr Lys Lys Asp Leu Tyr  
 565 570 575  
 Ala Leu Phe Ser Lys Tyr Thr Tyr Ile Thr Ser Met His Asp Met His  
 580 585 590  
 Ile Cys Ser Leu Glu Asn Leu Cys Ser Asn Ile Ile Leu Leu Glu Lys  
 595 600 605  
 Lys Tyr Ala Lys Thr Phe Asn Glu Val Asp Thr Asn Ser Glu Asp Thr  
 610 615 620  
 Glu Asp Phe Ser Ile Asn Ile Lys Leu Glu Glu  
 625 630 635

<210> 34  
 <211> 432  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 34  
 Met Asn Asn Asp Ser Val Thr Trp Glu Ile Leu Gly Lys Gly Lys Cys  
 1 5 10 15  
 Ser Phe Lys Lys Lys Val Asp Thr Glu Ile Phe Cys Leu Asn Glu Tyr  
 20 25 30

Asn	Val	Thr	Gly	Leu	Cys	Thr	Lys	Ala	Asn	Cys	Pro	Leu	Ser	Asn	Ser
	35						40					45			
Val	Tyr	Ser	Thr	Ile	Ile	Leu	Asp	Lys	Gly	Glu	Ile	Tyr	Leu	Tyr	Met
	50					55					60				
Lys	Ser	Val	Glu	Arg	Ala	His	Leu	Pro	Ser	Ala	Leu	Trp	Ser	Arg	Val
	65				70					75					80
Leu	Leu	Ser	Leu	Asn	Lys	Lys	Glu	Ala	Phe	Asn	Val	Ile	Tyr	Lys	Glu
				85					90					95	
Leu	Lys	Phe	Thr	Gln	Asn	Ile	Lys	His	Ile	Lys	Lys	Cys	Met	Lys	Arg
			100					105					110		
Tyr	Val	Arg	Ile	Lys	Glu	Ile	Leu	Lys	Arg	Ser	Arg	Lys	Leu	Ile	Leu
		115					120					125			
Gln	Lys	Gln	Val	Lys	Met	Met	Pro	Ile	Lys	Lys	Lys	Thr	Glu	Arg	Arg
	130					135						140			
Asp	Lys	Thr	Arg	Glu	Lys	Lys	Ala	Leu	Lys	Ala	Ala	Asn	Leu	Leu	Asn
	145				150					155					160
Asn	Val	Glu	Lys	Glu	Leu	Leu	Asn	Arg	Leu	Asn	Thr	Gly	Ile	Tyr	Gly
				165					170					175	
Ser	Leu	Tyr	Lys	Phe	Leu	Thr	Pro	Lys	Lys	Lys	Met	Lys	Asn	Lys	Asp
			180					185					190		
Ser	Glu	Leu	Thr	Lys	Ile	Phe	Asp	Val	Met	Gly	Glu	Asn	Lys	Asp	Glu
		195					200					205			
Met	Lys	Lys	Lys	Gly	Lys	Lys	Gly	Lys	Asp	Glu	Asn	Val	Asn	Tyr	Glu
	210					215					220				
Thr	Met	Ser	Gln	Glu	Gly	Gly	Gly	Gln	Glu	Asp	Asp	Asp	Glu	Asp	Val
	225				230					235					240
Asp	Met	Asp	Asp	Asp	Asp	Glu	Asp	Val	Asp	Met	Asp	Asp	Glu	Asp	Glu
				245					250					255	
Asp	Val	Asp	Met	Asp	Asp	Glu	Asp	Glu	Asp	Val	Asp	Met	Asp	Asp	Glu
			260					265					270		
Asp	Glu	Asp	Val	Asp	Met	Asp	Asp	Glu	Asp	Glu	Asp	Val	Asp	Met	Asp
		275						280				285			
Asp	Glu	Asp	Glu	Asp	Val	Asp	Met	Asp	Asp	Glu	Asp	Glu	Asp	Val	Asp
	290					295					300				
Met	Asp	Asp	Val	Asp	Asp	Asp	Asp	Glu	Asp	Val	Asp	Met	Asp	Asp	Val
	305					310				315					320
Asp	Asp	Asp	Asp	Glu	Asp	Val	Asp	Met	Asp	Asp	Val	Gly	Asp	Asp	Asp
				325					330					335	
Asp	Glu	Gly	Gly	Ile	Tyr	Asp	Asp	Asn	Asp	Glu	Asp	Asp	Tyr	Asp	Asn
			340					345					350		
Tyr	Asn	Asp	Asn	Asp	Lys	Asp	Ser	Val	Glu	Glu	Ser	Thr	Ser	Ile	Ser
		355					360					365			
Asn	Asp	Lys	Lys	Lys	Lys	Lys	Lys	Arg	Lys	Arg	Lys	Glu	Tyr	Lys	Lys
	370					375						380			
Glu	Tyr	Val	Asp	Asn	Glu	His	Ile	Lys	Asn	Leu	Gln	Ala	Asn	Gly	Lys
	385				390					395					400
Leu	Ala	Met	Asp	Asp	Asp	Glu	Ile	Glu	Glu	Met	Asn	His	Asn	Phe	Arg

405

410

415

Arg Lys Lys Lys Ser Asn Ser Lys Lys Glu Lys Gly Lys Tyr Cys Met  
 420 425 430

&lt;210&gt; 35

&lt;211&gt; 560

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 35

Met Ile Met Ser Tyr Lys Lys Lys Asn Asn Asn Asp Val Ile Asn Asn  
 1 5 10 15

Ile Gln Arg Ala Lys Asn Asp Leu Phe Phe Ile Lys Pro Ser Val Lys  
 20 25 30

Leu Asn Leu Cys Ser Ser Lys Phe Ile His Arg Ile Lys Ser Val Asn  
 35 40 45

Lys Arg Tyr Val Glu Lys Asn Glu Tyr Ile Gln Gln Ile Asp Asn Asp  
 50 55 60

Ile Glu Glu Lys Lys Lys Lys Lys Thr Thr Ser Lys Arg Asn Asn  
 65 70 75 80

Lys Ser Ser Asn Gln Ile Asn Asp Asp Tyr Glu Thr Phe Leu Ile Val  
 85 90 95

Asp Gly Ser Ser Ile Leu Phe Lys Asn Phe Phe Gly Met Pro Phe Leu  
 100 105 110

Lys Asn Asp Asn Asp Val Asn Leu Ser Thr Ile Tyr Gly Phe Ile Gln  
 115 120 125

Ser Leu Asn Lys Ile Tyr Asn Leu Phe Leu Pro Thr Tyr Ile Ala Ile  
 130 135 140

Ile Phe Asp Ser Lys Thr Ser Asn Asn Asp Lys Lys Lys Ile Tyr Ala  
 145 150 155 160

Asn Tyr Lys Ile Phe Arg Arg Lys Asn Pro Asp Glu Leu Tyr Glu Gln  
 165 170 175

Leu Lys Ile Val Ser Asn Phe Cys Asp Thr Ile Gly Ile Lys Thr Ile  
 180 185 190

Ser Ser Thr Asn Ile Glu Ser Asp Asp Tyr Ile Ala Arg Ile Val Asp  
 195 200 205

Asn Ile Ser Asn Thr Leu Lys Glu Lys Lys Gln Lys Asp Phe Ser Phe  
 210 215 220

Val Asn Asn His Gln Glu Lys Glu Pro Pro Pro Met Tyr Thr Tyr Met  
 225 230 235 240

Lys Asn Asn Val Tyr Asp Asn Ala Gly Ser Ile Gly Thr Asn Lys Ile  
 245 250 255

Phe Asp Lys Glu Pro Asn His Ile Asn Gly Asn Ile Asn Gly Asn Val  
 260 265 270

Asn Asp His Thr Asn Gly Asn Val Asn Asp His Ile Asn Gly Asn Ile  
 275 280 285

Asn Asp His Ile Asn Gly Asn Ile Asn Asp His Ile Asn Asp His Thr



290				295				300							
Asn	Asp	His	Thr	Asn	Asp	His	Thr	Asn	Asp	His	Thr	Asn	Asp	His	Thr
305				310				315				320			
Asn	Asp	His	Thr	Asn	Asp	His	Leu	Asn	Asp	Tyr	Glu	Tyr	Tyr	Glu	Tyr
				325				330				335			
Tyr	Asn	Thr	Asn	Asp	Asp	Asp	His	Tyr	Asn	Ile	Asn	Asp	Asp	Asp	His
			340					345				350			
Tyr	His	Ile	Asn	Asp	Asp	Ala	Tyr	Asn	Asn	Phe	Tyr	Asp	Asn	Ile	Tyr
		355					360					365			
Ala	Glu	Glu	Asn	Val	Ser	Cys	His	Glu	Asn	Val	Ala	Thr	Asn	Asn	Ile
370						375					380				
Asp	Lys	Lys	Lys	Lys	Phe	Arg	Val	Ile	Val	Val	Ser	Ser	Asp	Lys	Asp
385				390						395					400
Leu	Leu	Gln	Leu	Leu	Glu	Tyr	Asn	Asn	Glu	Thr	Tyr	Asn	Met	Asp	Ile
			405						410					415	
Ser	Ile	Cys	Gln	Pro	Asn	Lys	Lys	Tyr	Arg	Leu	Val	Asn	Ser	His	Leu
			420					425				430			
Phe	Tyr	Glu	Glu	His	Glu	Ile	Leu	Pro	Ser	Gln	Tyr	Ser	Asp	Tyr	Leu
		435					440					445			
Ile	Leu	Thr	Gly	Asp	Lys	Thr	Asp	Gly	Ile	Ser	Gly	Val	Pro	Tyr	Ile
450						455					460				
Gly	Asp	Lys	Thr	Ser	Lys	Cys	Leu	Leu	Lys	Glu	Tyr	His	Asn	Ile	Glu
465					470					475				480	
Asn	Ile	Leu	Lys	Asn	Leu	His	Lys	Leu	Pro	Ser	Lys	Leu	His	His	Ile
			485					490						495	
Phe	Leu	Asn	Asn	Ile	Glu	Asn	Ile	Asn	Thr	Phe	Arg	Lys	Leu	Ile	Lys
			500					505				510			
Leu	Lys	Cys	Glu	Thr	Asn	Glu	Ser	Leu	Val	Phe	Asp	Asp	Tyr	Lys	Gln
		515					520					525			
Lys	Arg	Ile	Lys	Asn	Phe	Glu	Gln	Phe	Arg	Asn	Phe	Ala	Asp	Lys	Tyr
530						535				540					
Ser	Leu	His	Lys	Leu	Leu	Lys	Lys	Ser	Val	Ile	Val	Asn	Tyr	His	Asp
545				550				555						560	

<210> 36  
 <211> 797  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 36  
 Met Ser Thr Thr Asp Glu Leu Asn Leu Leu Ile Gln Asn Leu Gln Lys  
 1 5 10 15  
 Cys Asn Asn Thr Asn Glu Cys Ile Asn Phe Asp Leu Ser Ser Thr Ile  
 20 25 30  
 Gln Gly Phe Leu Asn Cys Leu Asp Arg Asn Val Leu Glu Asn Ile Asp  
 35 40 45  
 Lys Gly Leu Gly Glu Asn Glu Tyr Glu Lys Glu Val Val Asp Asn Phe

50	55	60
Thr Ser Ala Ala Ile Phe Val Glu Asn Cys Val Lys Ile Phe Ser Gln 65 70 75 80		
Lys Ile Glu His Leu His Asn Leu Ala His Asn Thr Leu Tyr Asn Ile 85 90 95		
Tyr Lys Glu Asn Lys His Asn Ser Ser Ser Lys Lys Asn Gln Leu Ile 100 105 110		
Met Ser Asp Glu Glu Glu Tyr Leu Tyr Ile Asn Glu Ile Lys Asn Met 115 120 125		
Lys Asn Thr Gln His Asp Asn Asp Ile Ile Glu Asp Asp Ile Leu Ile 130 135 140		
Lys Thr Ile Pro Phe Pro Thr Phe Leu Phe Ser Asp Asn Ile Lys Lys 145 150 155 160		
Thr Lys Asp Ile Asn Glu Asp Lys Arg Lys Thr Asn Phe Asn Asn Asn 165 170 175		
Glu Glu Asp Lys Glu Lys Asp Asn Lys Asn Lys Asp Asn Asp Ile Asp 180 185 190		
Ala Ile Asn Glu Phe Glu Ile Thr Asp Asn Asn Ser Val Asn Thr Leu 195 200 205		
Asn Phe Glu Lys Ile Phe Ile Glu Asn Asp Gly Ile Leu Leu Leu Asp 210 215 220		
Ile Asn Asp Tyr Asn Val Phe Ile Asp Asp Pro Tyr Asn Phe Ser Ile 225 230 235 240		
Gln Asn Lys Asn Ser Thr Ile Leu Phe Glu Lys Tyr Asp Phe Phe Ser 245 250 255		
Arg Arg Ser Thr Tyr Leu Ser Ser Asn Thr Leu Ser Lys Tyr Val Val 260 265 270		
Glu Asn Lys Asn Met Asp His Ile Tyr Lys Leu Tyr Asn His Ile Thr 275 280 285		
Asp Ile Ile Asn Lys Asn Ile Cys Phe Asp Ile Phe Leu Phe Lys Gln 290 295 300		
Asp Phe Phe Asp Tyr Asp Phe Ser Leu Gly Ile Leu Lys Asn Lys Lys 305 310 315 320		
Ser Ile Leu Asn Lys Phe Lys Gln Gln Gln Lys Lys Leu His Pro Leu 325 330 335		
Glu Glu Asn Thr His Met Asp Thr His His Ile Asn Asn Asn His His 340 345 350		
Leu Gln Lys Tyr Asp Leu Asn Arg Pro Leu Pro Asn Tyr Tyr Met Leu 355 360 365		
His Cys Tyr Asn Ile Lys Asn Tyr Gln Asp Phe Phe Arg Tyr Met Gln 370 375 380		
Pro Asn Tyr Ile Leu Glu Ile Met Lys Arg His Ile Ile Lys Glu Ile 385 390 395 400		
Tyr Asn Thr Asn Gln Gln Glu Arg Ala Ile Gln Lys Glu Ala Tyr Glu 405 410 415		
Ile Tyr Asn Glu Gln Thr Lys Lys Lys Asn Asp His Lys Glu Asn Asn 420 425 430		

Asn Ile Asp Val Pro Lys Tyr Lys Asp Asn Thr Lys Cys Tyr Asp Ser  
 435 440 445  
 Pro Phe Tyr Asn Tyr Tyr Ile Ser Asn Asn Ile Ile Gln Phe Asp His  
 450 455 460  
 Leu Ile Asp Asp Asp Met Ile Tyr Phe Asp Glu Tyr Phe Tyr Lys Ser  
 465 470 475 480  
 Leu Ile Leu Tyr Asn Thr Asn Ile Asn Asp Leu His Lys Asn Thr Asn  
 485 490 495  
 Asn Asn Gln Thr Asn Asp Glu Thr Asn Ile Ile Asn Asn Met Lys Asp  
 500 505 510  
 Glu Lys Gln Lys Asn Leu Ile Ile Tyr Ser Asn Ile Asn Asn Phe Ser  
 515 520 525  
 Asn Asp Gln Lys Leu Phe Asn Gln Ile Lys Ile Pro Glu Leu Tyr Ile  
 530 535 540  
 Gln Lys Leu Gly Leu Asn Phe Ser Tyr Tyr His Leu Glu Pro Leu Ile  
 545 550 555 560  
 Tyr Asn Phe Ile Lys Thr Leu Lys Lys Lys Asn Asp Phe Glu Lys Phe  
 565 570 575  
 Phe Ser Val Asn Leu Phe Asp Asp Lys Pro Ile Tyr Glu Phe Asp Ile  
 580 585 590  
 Leu Arg Asp Asp Glu Tyr Asp Glu Gln Lys Asn Glu Asp Asn Lys Asn  
 595 600 605  
 His Ile Glu Glu Asn Ile Asn Phe Glu Asn Ile Thr Asp Lys Asn Ile  
 610 615 620  
 Leu Asn Asp Glu Met Asp Asn Ile Pro Ile Ala Ile Phe Glu Asn Asp  
 625 630 635 640  
 His Leu Asp Asn Thr Phe Ile Met Asn Asp Asp Gln Glu Leu Gln Asp  
 645 650 655  
 Arg Val Ser Lys Trp Asn Ala Phe Leu Glu Glu Lys Leu Glu Ile Leu  
 660 665 670  
 Lys Arg Gln Pro Lys Tyr Asp Leu Asp Leu Tyr Lys Lys Asn Ile Ile  
 675 680 685  
 Asn Tyr Thr Ile Asn Asn Gly Glu Asn Ile Leu Phe Thr Lys Leu Ile  
 690 695 700  
 Lys Asn Lys Asp Lys Phe Glu Ile Ser Arg Asn Phe Leu Thr Thr Leu  
 705 710 715 720  
 Met Leu Ile Asn Ala Asp Ile Leu Asn Ile Lys Lys Ile Asn Lys His  
 725 730 735  
 Lys Lys Ser Asn Asn Ile Ser Asn Tyr Glu Ile His Ile Lys Lys Glu  
 740 745 750  
 Asn Leu Gln Gln Tyr Leu Ser Ile Ser Lys Gln Val Gln Asn Lys Ser  
 755 760 765  
 Phe Leu Ile Lys Glu Lys Lys Arg Lys Lys Asn Lys Gln His Leu Thr  
 770 775 780  
 Asn Gly Met Lys Asp Thr Ser Lys Lys Lys Gln Lys Ile  
 785 790 795

<210> 37  
 <211> 2295  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 37

```

Met Ile Lys Asn Val Phe Tyr Leu Asn Phe Ile Phe Ser Phe Phe Leu
  1           5           10           15

Leu Ile Ile Lys Cys Asp Glu Ser Val Ser Asn Gly Arg Lys Glu Ile
          20           25           30

Tyr Phe Asp Asp Asp Glu Lys Leu Lys Leu Ser Ser Phe Phe Asp Arg
          35           40           45

Ser Thr Asn Ile Asn Leu Asp Val Gly Glu Asn Asp Glu Leu Ser Ser
  50           55           60

Tyr Val Pro Arg Glu Val Asp Glu Lys Lys Lys Lys Asn Lys Lys Asp
  65           70           75           80

Ile Asp Ser Lys Glu Asn Ser Lys Ser Gly Asn Asn Ile Tyr Asn Lys
          85           90           95

Asp Asn Thr Lys Asn Asn Glu Asp Val Asn Tyr Asn Val Val Leu Lys
          100          105          110

Asp Gly Arg Ala Lys Glu Gly Ile Ile Thr Asp Glu Lys Arg Arg Ser
          115          120          125

Ser Thr Lys Asp Gly Lys Asn Lys Glu Gln Asn Asn Asn Lys Met Asn
          130          135          140

Ser Asp Asp Val His Asp Asn Asn Asn Asn Met Asn Asp Ile Asn Phe
          145          150          155          160

Val Val Glu Tyr Asn Lys Met Ile Asp Asn Tyr Asp Lys Ile Leu Asp
          165          170          175

Glu Leu Ile Leu Lys Ser Ile Asn Arg Asn Asn Tyr Asn Tyr Phe Asn
          180          185          190

Met Leu Asp Glu Tyr Ser Leu Gln Thr Lys Leu Asn Lys Glu Met Tyr
          195          200          205

Asp Ser Leu Asn Tyr Leu Ile Arg Leu Met Asn Asn Lys Asn Ser Arg
          210          215          220

Lys Tyr Phe Ile Ser Phe Ser Asn Asn Glu Lys Lys Lys Ile Ile Lys
          225          230          235          240

Asn Asp Met Asn Glu Asn Ile Tyr Ile Arg His Phe Ile Val Ser Leu
          245          250          255

Phe Arg Trp Tyr Asn Asn Phe Lys Leu Ile Glu Thr Cys Phe Asp Lys
          260          265          270

Asn Asn Phe Ile Tyr Tyr Ile Asp Glu Asn Lys Ile Tyr Ser Tyr Lys
          275          280          285

Tyr Asn Tyr Lys Leu Met Leu Asn Leu Phe Ser Ser Glu Asn Phe Leu
          290          295          300

Tyr Tyr Ile Asn Leu Ser Lys Phe Ser Leu Leu Glu Ile Ile Asp Asn
          305          310          315          320

Tyr Asn Lys Tyr Ser Phe Ile Ile Asn Asn Ile Lys Arg Asp Tyr Pro
          325          330          335

```

Asn Asn Met Tyr Val Cys Gln Ser Phe Tyr Asp Phe Ile Tyr Ser Tyr  
 340 345 350  
 Phe Leu Ser Tyr Asn His His Phe Phe Asp Lys His Lys Tyr Leu Ile  
 355 360 365  
 Asn Met Asp Ile Trp Asn Asn Ser Ile Gln Thr Lys Gly Gln Ile Gly  
 370 375 380  
 Asn His Lys Leu Tyr Lys Lys Leu Lys Lys Leu Asn Glu Asn Leu Ile  
 385 390 395 400  
 Leu Tyr Asn Tyr Ile Lys Asn Asp Asp Ser Glu Met Ile Pro Tyr Val  
 405 410 415  
 Thr Leu Glu Met Arg Met Ile Phe Ser Asn Phe Thr Asn Leu Leu Ile  
 420 425 430  
 Asp Ile Leu Asn Lys Leu Tyr Asn Ile Asp Tyr Gln Asp Asn Ile Lys  
 435 440 445  
 Gln Glu Asn Val Asn Val Asn Pro Gln Arg Asp Ala Pro Gln Asp Tyr  
 450 455 460  
 Val His Asn Lys Asn Asp Val Asp Val Ser Leu Lys Asn Val Lys Glu  
 465 470 475 480  
 Pro Lys Lys Val Glu His Asn Lys Ala Met Ser Asn Tyr Glu Thr Asp  
 485 490 495  
 Glu Arg Gly Asp Met Ile Tyr Asp Asn Thr Asn Lys Glu Lys Phe Glu  
 500 505 510  
 Lys Ser Glu Gly Thr Phe Asn Asn Ile Ser Gly Gly Glu Asp Thr Phe  
 515 520 525  
 Lys Asn Ile Ser Gly Gly Glu Asp Thr Phe Lys Asn Ile Ser Glu Gly  
 530 535 540  
 Asp Gly Glu Val Asp Gly Asp Gly Glu Gly Asp Gly Asp Gly  
 545 550 555 560  
 Glu Gly Ala Asp Asp Ser Ser Val Asp Thr His Asn Asn Lys Asn Asp  
 565 570 575  
 Gly Lys Glu Ser Glu Ser Asp Val Trp Asn Leu Leu Met Asp Ser Tyr  
 580 585 590  
 Lys Lys Leu Ala Asn Asp Glu Asn Phe Lys Lys Tyr Asn Lys Tyr Ile  
 595 600 605  
 Leu Lys Asn Leu Asp Lys Phe Leu Asn Met Ser Ser Glu Lys Lys Glu  
 610 615 620  
 Asp Ile Asn Ser Tyr Lys Asn Lys Tyr Glu Leu Lys Glu Gly Ile Ile  
 625 630 635 640  
 Tyr Asn Lys Val Ser Asp Lys Tyr Ile Pro Leu Ile Phe Asn Pro Thr  
 645 650 655  
 Lys Asp Val Phe Thr Ser Ile Asn Gln Ile Asn Ile Lys Ser Lys Ile  
 660 665 670  
 Asn Phe Phe Asn Ile Tyr Glu Tyr Leu Ile Thr Ile Thr Lys Tyr Lys  
 675 680 685  
 Glu Asn Lys Asn Phe Tyr Asp Asp Leu Leu Lys Cys Arg Arg Glu Ile  
 690 695 700  
 Phe Phe Lys Asp Arg His Leu Leu Glu Asn Asn Ile Met Asp Lys

705		710		715		720
Gln Glu Glu Leu Lys Lys Asn Ile Arg Asn Leu Met Arg Ile His Glu						
		725		730		735
Val Ser Asn Glu Gly Asn Asn Arg Asn Thr Ile Asn Arg Lys Tyr Lys						
		740		745		750
Lys Tyr Gly Thr Tyr Asp Tyr Asp Lys Met Asn Glu Leu Tyr Tyr Val						
		755		760		765
Glu Lys Asn Ile Leu Asn Val Asn Asp Thr Asn Thr Phe Asn Phe Met						
		770		775		780
Asn Asn Lys Glu Lys Asp Lys Asn Tyr Phe Asp Ile Asn Lys Thr Met						
		785		790		800
Arg Ile Tyr Asp Tyr Tyr Asn Asn Ile Asn Leu Asn Ile Phe Thr Pro						
		805		810		815
Ala Ala Ile Lys Met Lys Asp Lys Ile Tyr Asp Gln Leu Lys Leu Leu						
		820		825		830
Arg Ser Asn Phe Val Glu Lys Leu Lys Asn Glu Ser Ile Cys Val Leu						
		835		840		845
Ser Phe Leu Tyr Leu Ile Gly Ile Asn Asp Asp Asn Gly Lys Leu His						
		850		855		860
Phe Pro Tyr Gly Phe Pro Arg Asn Ile Asp Phe Ser Val Lys Leu Ile						
		865		870		880
Arg Glu Gly Lys Asp Gly Leu Cys Asn Phe Leu Ser Gly Val Leu Tyr						
		885		890		895
His Ile Asn Leu Pro Ile Phe Val Asn Asn Ser Ser Ile Ser Ile Ser						
		900		905		910
Thr Glu Met Asn Asp Asp Val Leu Glu Met Asn Asp Asn Ser Ile Asn						
		915		920		925
Ser Phe Phe Tyr Ile Tyr Tyr Lys Asn Asn Glu Asn Ile Arg Asn His						
		930		935		940
Asp Phe Leu Ser Asp Glu Asn Arg Ile Ile Pro Arg Lys Glu Asp Asn						
		945		950		960
Ile Lys Ser Lys Ile Ile Ser Tyr Ser Leu Gly Ser Ser Lys Asp Asp						
		965		970		975
Phe Phe Ser Lys Leu Ala Phe Thr Asn Asn Val Ile Arg Leu Lys Tyr						
		980		985		990
Lys Asn Lys Thr Asn Asn Thr Tyr Leu Lys Asp Tyr Phe Asp Phe Thr						
		995		1000		1005
Phe Asp Lys Ile Asn Tyr Lys Asn Ser Val Ile Lys Asn Asn Val Ser						
		1010		1015		1020
Pro Phe Leu Thr Thr Cys Asp Tyr Leu Leu Ser Asn Ile Leu Gly Ala						
		1025		1030		1035
Val Val Asp Ser Leu Arg Asn Ser Ser Thr Leu Glu Ser Gly Val Tyr						
		1045		1050		1055
Glu Glu Asn Ile Asn Asp Lys Asn Lys Asn Ile Ile Gln Asn Thr Val						
		1060		1065		1070
Val Gln Asn Lys Asn Leu Phe Glu Tyr Phe Val Lys Leu Ala Asp Asn						
		1075		1080		1085

Arg Asn Ser Tyr Ala Leu Ala Ala Leu Gly Glu Ile Tyr Tyr Leu Gly  
 1090 1095 1100  
 Asn Glu Ser Ile Gly Ile Glu Arg Asp Glu Ile Lys Ala Phe Glu Phe  
 1105 1110 1115 1120  
 Trp Lys Lys Ala Ala Asp Gln Gly Asp Thr Thr Ser Ala Leu Ser Thr  
 1125 1130 1135  
 Gly Tyr Ala Tyr Leu Asp Glu Tyr Lys Lys Phe Leu Lys Lys Glu Glu  
 1140 1145 1150  
 Leu Val Lys Asn Met Asp Arg Glu Asp Ile Leu Thr Met Ile His Leu  
 1155 1160 1165  
 Glu Asn Ser Thr Lys Asp Lys Lys Asn Val Thr Leu Glu Met Phe Gln  
 1170 1175 1180  
 Glu Ser Ser Glu Lys Lys Asn Gln Lys Lys Lys Lys Lys Glu Lys Lys  
 1185 1190 1195 1200  
 Glu Gln Asp Gly Asn Thr Asp Gly Asp Arg Val Asp Asp Lys Ile Val  
 1205 1210 1215  
 Gln Asn Val Gly Asn Val Phe Gln Gln Ser Tyr Gly Asn Val Asp Glu  
 1220 1225 1230  
 Ser Met Gly Arg Asn Gly Ser Ile Asp Gly Phe Ser Met Pro Pro Ser  
 1235 1240 1245  
 Gly Gly Leu Asn Asn Val Ser Val Gln Asn Asn Ala Asn Ile Gln Asn  
 1250 1255 1260  
 Asn Ala Asn Ile Gln Asn Asn Ala Asn Ile Gln Ser Asn Ala Asn Ile  
 1265 1270 1275 1280  
 Gln Asn Asn Ala Asn Ile Gln Ser Asn Ala Asn Ile Gln Ser Asn Ala  
 1285 1290 1295  
 Asn Ile Gln Ser Asn Ala Asn Ile Gln Ser Asn Val Asn Ser His Gly  
 1300 1305 1310  
 Gly Thr Asn Arg Gln Asn Asn Ile Asn Asn Val Asn Phe Phe Glu Asn  
 1315 1320 1325  
 Asn Ala Tyr Thr Gln Gln Thr Ser Tyr Gly Gly Trp Ala Asn Pro Ser  
 1330 1335 1340  
 Glu Asp Val Phe Asn Asn Ser Phe Ser Ser Ser Val Pro Ser Ser Phe  
 1345 1350 1355 1360  
 Leu Phe Asp Ile Pro Glu Gly Ser Glu Tyr Glu His Met Thr Glu Asn  
 1365 1370 1375  
 Ile Leu Asp Glu Gln Met Asn Phe Phe Asn Thr Lys Asn Asn Lys Glu  
 1380 1385 1390  
 Gln Gln Glu Gly Gly Pro Asn Asn Glu Ser Asn Gly Met Trp Asn Asp  
 1395 1400 1405  
 Glu Asn Asp Glu Met Ile Lys Lys Tyr Met Lys Asp Leu Asn Asp Asp  
 1410 1415 1420  
 Leu Asn Lys Ser Leu Lys Asn Ala Glu Glu Tyr Phe His Lys Ala Ile  
 1425 1430 1435 1440  
 Arg Asn Asn Asp Asp Ser Leu Glu Asn Ile Leu Ala Lys Tyr Asn Ile  
 1445 1450 1455

His Lys Phe Gly Leu Gly Thr Glu Lys Asn Ile Glu Leu Ala Gly Tle  
 1460 1465 1470  
 Tyr Leu Lys Lys Ala Ala Asp Lys Gly Asp Asn Ile Ser Gln Met Leu  
 1475 1480 1485  
 Leu Gly His Tyr Tyr Ser Gly Ser Asp Ile Gly Ile Lys Leu Asn Asp  
 1490 1495 1500  
 Tyr Lys Asp Asp Asp Lys Ile Glu Asn Leu Arg Lys Ser Tyr Lys Tyr  
 1505 1510 1515 1520  
 Tyr Lys Met Ser Ala Gln Asn Gly Asn Ile Ile Ser Leu Tyr Asn Lys  
 1525 1530 1535  
 Ser Ile Leu Ile Leu Lys Gly Val Asn Pro Lys Tyr Lys Thr Phe Asn  
 1540 1545 1550  
 Glu Lys Cys Glu Lys Thr Leu Lys His Phe His Phe Ile Gly Leu Phe  
 1555 1560 1565  
 Asn Glu Arg Leu Tyr Met Leu Thr Lys Leu Leu Arg Arg Asn Tyr Gln  
 1570 1575 1580  
 Phe Lys Asp Tyr Thr Gly Ser Leu Leu Leu Ser Ile Met Leu Ser Glu  
 1585 1590 1595 1600  
 Leu Gly Asp His Ala His Asn Val Asn Ala Ser Met Leu Trp Thr Leu  
 1605 1610 1615  
 Lys Arg Lys Thr Met Gln Gln Phe Thr Glu Lys Tyr Asn Ile Val Glu  
 1620 1625 1630  
 Asn Leu Lys Leu Ser Leu Ile Lys Glu Leu Lys Asn Lys Glu Glu Lys  
 1635 1640 1645  
 Glu Lys Glu Lys Arg Lys Asn Asn Ile His Asn Val Tyr Asn Asn Asn  
 1650 1655 1660  
 Asn Ser Asn Ile Asn Gly Tyr Lys Lys Cys Asp Lys Asn Cys Asn Asp  
 1665 1670 1675 1680  
 Asn Val Arg Lys Asn Gln Lys Asp Leu Asn Gln Ile Asp His Thr Ile  
 1685 1690 1695  
 Val Lys Gly Asp Thr Pro Tyr Tyr Tyr Glu Lys Asn Ile Asn Glu Lys  
 1700 1705 1710  
 Ile Lys Arg Ile Tyr Lys Lys Asn Lys Asn Ala Ser Tyr Ser Phe Ser  
 1715 1720 1725  
 Lys Val Arg Lys Met Tyr Ser Ile Ser Leu Leu Thr Asn Cys Ser Met  
 1730 1735 1740  
 Leu Ser Glu Phe Leu Arg Glu Arg Pro Leu Phe Ser Lys Ile Ile Tyr  
 1745 1750 1755 1760  
 Cys Tyr Asn Phe Lys Arg Glu Leu Tyr Ile Tyr Tyr Asn Arg Leu Ser  
 1765 1770 1775  
 Trp Phe Thr Tyr Gln Met Met Lys Met Gln His Glu Asp Asp Leu Ser  
 1780 1785 1790  
 Asp Asp Lys Asp Arg Ser Glu Gly Trp Asn Ser Ile Asn Ile Lys Lys  
 1795 1800 1805  
 Phe Asn Glu Asn Val Gln Arg Asp His Val Asn Arg Lys Glu Asn Val  
 1810 1815 1820  
 Asn Val Lys Ala Asn Ala Asn Val Lys Ala Asn Ala Asn Val Lys Glu



1825	1830	1835	1840
Asn Ala Asn Val Lys Glu Asn Ala Asn Val Lys Ala Asn Ala Asn Val			
1845	1850	1855	
Lys Ala Asn Ala Asn Val Lys Ala Asn Ala Asn Val Lys Glu Asn Ala			
1860	1865	1870	
Asn Val Lys Glu Asn Ala Asn Val Lys Glu Asn Ala Asn Val Lys Ala			
1875	1880	1885	
Asn Ala Asn Val Asn Asp Asn Ala Asn Ser Val Leu Asn Lys Asn His			
1890	1895	1900	
Asn Asn Asp Ile Tyr Asp Tyr Ser Tyr Tyr Lys Lys Asn Asp Glu Arg			
1905	1910	1915	1920
Arg Asn Asp Lys Lys Ser Glu Phe Phe Asn Thr Ser Lys Asn Lys Lys			
1925	1930	1935	
Glu Glu Lys Lys Glu Ile Lys Ile Thr Tyr His Asp Thr Tyr Asp Leu			
1940	1945	1950	
Cys Lys Lys Tyr Ser Gln Ile Glu Leu Tyr Glu Lys Tyr Asp Lys Ile			
1955	1960	1965	
Ile Leu Asn Thr Leu Lys Lys Asp Asp Asp Val Glu Glu Lys Ile Asn			
1970	1975	1980	
Lys Ile Glu Asn Met Lys Ser Val Ile Leu Glu His Leu Arg Ile Ser			
1985	1990	1995	2000
Glu Phe Leu His Cys Tyr Tyr Lys Pro Ile Ser Tyr Tyr Gln Ile Lys			
2005	2010	2015	
Leu Glu Glu Glu Lys Glu Lys Arg Ala Lys Ile Asp Glu His Ile Tyr			
2020	2025	2030	
Asn Glu Glu Arg Tyr Tyr Lys Asn Asp Lys Ser Asn Tyr Asn Ser Phe			
2035	2040	2045	
Tyr Ser Asn Lys Trp Lys Thr Met Lys Asp Tyr Asn Ile Lys Asn Leu			
2050	2055	2060	
Tyr Glu Ser Glu Phe Tyr Arg Tyr Ser Val Phe Leu Glu Asn Ile Asp			
2065	2070	2075	2080
Met Lys Glu Ile Phe Asn Tyr Lys Lys Lys Tyr Ser Ser Asn Ile Phe			
2085	2090	2095	
Asp Glu Ile Gln Ser Phe Ser Lys Asn Cys Glu Val Cys Lys Gln Tyr			
2100	2105	2110	
Tyr Asp Ile Tyr Ser Ala Tyr Tyr Gly His Lys Lys Ser Gly Ile Asn			
2115	2120	2125	
Leu Ile Lys Lys Tyr Arg Glu Gly Asp Glu Phe Thr Ile Lys Ser Lys			
2130	2135	2140	
Arg Lys Glu Leu Gln Phe Leu Ile Arg Asn Ser Asp Glu Asp Asn His			
2145	2150	2155	2160
Gln Ser Leu Tyr Tyr Lys Ala Leu Phe Leu Glu His Asn Asn Leu Asp			
2165	2170	2175	
Asn Leu Lys Asn Ile Leu Gln Ile Tyr Phe Lys Leu Ala Thr Asp Asp			
2180	2185	2190	
His Asn Thr Cys Asn Val Ile Gly Phe Leu Gly Ile Met Lys Ile Phe			
2195	2200	2205	

Phe Lys Lys Leu Phe Phe Asp Phe Asn Ile Phe Ser Lys Asn Asn Lys  
 2210 2215 2220  
 Lys Asn Ile Phe Thr Phe Pro Leu Lys His Lys Thr Phe Tyr Asp Asp  
 2225 2230 2235 2240  
 Asn Leu Cys Ser Leu Gln Lys Asn Ile Leu Leu Lys Ser Glu Phe Asp  
 2245 2250 2255  
 Asn Lys Cys Phe Asn Phe Asp Tyr Leu Leu Lys Asn Asn Tyr Ile Tyr  
 2260 2265 2270  
 Ser Gln Ile Arg Tyr Ser Asp Phe Phe Lys Val Leu Tyr Asn Leu Ile  
 2275 2280 2285  
 Leu Ser Phe Phe Lys Ile Ile  
 2290 2295

<210> 38  
 <211> 696  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 38  
 Met Asn Asp Val Asn Arg Lys Ala Phe Gln Asn Glu Met Ile Leu Lys  
 1 5 10 15  
 Ser Leu Leu Leu Asn Leu Glu Gly Ser His Thr Asn Asn Asn Val Lys  
 20 25 30  
 Lys Lys Ile Glu Gln Thr Asn Phe Glu Lys Cys Glu Lys Ala Ser Ile  
 35 40 45  
 Leu Leu Asp Asn Pro Ser Ile Phe Glu Asp Leu His Ile Ile Glu Asp  
 50 55 60  
 Asn Ile Tyr Pro Lys Met Lys Glu Gln Glu Lys Glu Leu Asn Leu Tyr  
 65 70 75 80  
 Asn Tyr Val Asn Thr Asp Tyr Thr Lys His Leu Asn Asp Lys Lys Asn  
 85 90 95  
 Tyr Asn Gln Cys Glu Lys Ile Phe Asp Leu Thr Lys Tyr Gln His Lys  
 100 105 110  
 Asn Met Lys Lys Lys Ile Ser Phe Asp Asn Asn Pro Lys Glu Ser Tyr  
 115 120 125  
 Ser Asp Asn Asn Asp Val Asn Leu Cys Tyr Lys Asn Leu Asn Ser Glu  
 130 135 140  
 Thr Gln Tyr Asn Asn Ile Tyr Val Asn Asn Leu Asn Arg Glu Asn Tyr  
 145 150 155 160  
 Thr Glu Thr Cys Glu Glu Tyr Phe Asn Asn Pro Ser Glu Glu Asp Ser  
 165 170 175  
 Leu Thr Cys Ser Gly Ile Leu Glu Lys Tyr Glu Gln Asp Arg Met Glu  
 180 185 190  
 Glu Ile His Met Lys Phe Glu Thr Asn Arg Met Tyr Ser Asn Tyr Ile  
 195 200 205  
 Lys Asn Glu His Asn Leu Asn Asp Val Lys Ser Gly Asn Asn Ile Val  
 210 215 220  
 Asn Tyr Glu Gln Lys Asp Asn Thr Tyr Ile Phe Asn Leu Ser Ser Gly  
 225 230 235 240

Lys Asn Glu Met Asn Arg Lys Thr Lys Gln Lys Phe Tyr Leu Asp Asp  
 245 250 255  
 His Val Glu Leu Ala Lys Asn Lys Ile Lys Asn Lys Glu Glu Ala Phe  
 260 265 270  
 Val Tyr Lys Asn Glu Ile Gly Asn Asn Tyr Asn Glu Arg Asp Ile Lys  
 275 280 285  
 Thr Ser Leu Asn Asn Phe Ser Ile Lys Glu Lys Thr Leu Tyr Cys Met  
 290 295 300  
 Glu Asn Val Glu Glu Asn Asp Lys Arg Asn Lys Lys Asn Lys Arg Asn  
 305 310 315 320  
 Ile Lys Asn Lys Arg Asn Ile Lys Asn Tyr Leu Lys Asn Glu Leu Ile  
 325 330 335  
 Asn Ile His Lys Lys Gly Ser Lys Lys Asn Tyr Ile Asn Met Lys Glu  
 340 345 350  
 Phe Glu Asp Lys Ile Lys Glu Ile His Asn Glu Tyr Glu Leu Lys Tyr  
 355 360 365  
 Asp Asp Ile Ile Lys Gln Tyr Asp Glu Asp Asp Ile Arg Lys Lys Lys  
 370 375 380  
 Leu Ile Asp Asn Ile Tyr Met Lys Tyr Met Asn Met Lys Asn Glu Leu  
 385 390 395 400  
 Ile Lys Thr Gln Lys Glu Ile Ile Asn Ile Lys Glu Glu Asn Asn Lys  
 405 410 415  
 Leu Lys Glu Glu Leu Lys Ile Thr Pro Glu Arg Ile Ile Glu Ser Asn  
 420 425 430  
 Ile Val Asp Ser Tyr Lys Asn Lys Leu Glu Glu Tyr Ile Phe Leu Thr  
 435 440 445  
 Arg His Lys Asp Leu Lys Ile Lys Lys Leu Glu Glu Glu Leu Asn Lys  
 450 455 460  
 Glu Lys Lys Cys Ile Glu Glu Lys Glu Lys Arg Ile Ser Ala Ile Ser  
 465 470 475 480  
 Glu Gln Lys Asn Ser Leu His Lys Met Asn Ile Leu Leu Lys Lys Asp  
 485 490 495  
 Thr Met Asn Phe Glu Lys Lys Leu Glu Asn Leu Arg Lys Ile Asn Glu  
 500 505 510  
 Glu Leu Lys Gln Ile Ile Phe Tyr Lys Glu Ile Lys Ile Ser Tyr Phe  
 515 520 525  
 Ile Asn Ile Leu Asn Ile Ile Asp Glu Ala Ile Leu Asn Asp Asn Asn  
 530 535 540  
 Val Lys Asn Gly Lys Asn Lys Ile Lys Lys Asp Asn Gln Gln Lys Met  
 545 550 555 560  
 Glu Leu Asp Pro Ile Lys Asn Met Asn Lys Lys Ile Ile Ile Lys Ser  
 565 570 575  
 Ile Val His Lys Ile Lys Asp Ile Asn Lys Lys Met Glu Thr His Asn  
 580 585 590  
 Gln Met Leu Asn Thr Phe Glu Asn Arg Lys Asn Gln Ile Val His Lys  
 595 600 605

Asn Gln Glu Ile Leu Lys Asn Gly Asp Asn Leu Ile Lys Asp Ile Lys  
 610 615 620  
 Lys Lys Asn Gln Ser Glu Leu Leu Asp Asn Tyr Phe Asp Ser Thr Gly  
 625 630 635 640  
 Phe Ser Leu Asn Glu Lys Glu Cys Thr Leu Asp Lys Glu Asn Lys Glu  
 645 650 655  
 Leu Lys Thr Phe Phe Ser Asn Val Asp Leu Asp Glu Tyr Gln Glu Ile  
 660 665 670  
 Asp Leu Phe Lys Ser Glu Ile Lys Lys Glu Ile Gln Val Lys Glu Asn  
 675 680 685  
 Ile Glu Glu Leu Ser Asn Lys Gly  
 690 695

<210> 39  
 <211> 405  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 39  
 Met Asp Lys Leu Leu Ser Ser Leu Glu Asn Ile Glu Val Asp Asn Ile  
 1 5 10 15  
 Leu Lys Thr Ala Arg Glu Phe Lys Glu Asp Thr Cys Glu Glu Lys Ile  
 20 25 30  
 Asn Leu Ser Ile Gly Val Cys Cys Asn Asp Asp Gly Asp Leu His Ile  
 35 40 45  
 Phe Asp Ser Val Leu Asn Ala Asp Lys Leu Val Thr Glu Asn Tyr Lys  
 50 55 60  
 Glu Lys Pro Tyr Leu Leu Gly Asn Gly Thr Glu Asp Phe Ser Thr Leu  
 65 70 75 80  
 Thr Gln Asn Leu Ile Phe Gly Asn Asn Ser Lys Tyr Ile Glu Asp Lys  
 85 90 95  
 Lys Ile Cys Thr Ile Gln Cys Ile Gly Gly Thr Gly Ala Ile Phe Val  
 100 105 110  
 Leu Leu Glu Phe Leu Lys Met Leu Asn Val Glu Thr Leu Tyr Val Thr  
 115 120 125  
 Asn Pro Pro Tyr Ile Asn His Val Asn Met Ile Glu Ser Arg Gly Phe  
 130 135 140  
 Asn Leu Lys Tyr Ile Asn Phe Phe Asp Tyr Asn Leu Ile Asp Ile Asn  
 145 150 155 160  
 Tyr Asp Leu Phe Leu Asn Asp Leu Arg Asn Ile Pro Asn Gly Ser Ser  
 165 170 175  
 Val Ile Leu Gln Ile Ser Cys Tyr Asn Pro Cys Ser Val Asn Ile Glu  
 180 185 190  
 Glu Lys Tyr Phe Asp Glu Ile Ile Glu Ile Val Leu His Lys Lys His  
 195 200 205  
 Val Ile Ile Phe Asp Ile Ala Tyr Gln Gly Phe Gly His Thr Asn Leu  
 210 215 220  
 Glu Glu Asp Val Leu Leu Ile Arg Lys Phe Glu Glu Lys Asn Ile Ala  
 225 230 235 240

Phe Ser Val Cys Gln Ser Phe Ser Lys Asn Met Ser Leu Tyr Gly Glu  
 245 250 255  
 Arg Ala Gly Ala Leu His Ile Val Cys Lys Asn Gln Glu Glu Lys Lys  
 260 265 270  
 Ile Val Phe Asn Asn Leu Cys Phe Ile Val Arg Lys Phe Tyr Ser Ser  
 275 280 285  
 Pro Val Ile His Thr Asn Arg Ile Leu Cys Gln Leu Leu Asn Asn Gln  
 290 295 300  
 Asn Leu Lys Leu Asn Trp Ile Lys Glu Leu Ser Gln Leu Ser Gln Arg  
 305 310 315 320  
 Ile Thr Asn Asn Arg Ile Leu Phe Phe Asn Lys Leu Glu Thr Tyr Gln  
 325 330 335  
 Lys Lys Tyr Asn Leu Asn Tyr Asp Trp Asn Val Tyr Lys Lys Gln Arg  
 340 345 350  
 Gly Leu Phe Ser Phe Val Pro Leu Leu Ala Lys Ile Ala Glu His Leu  
 355 360 365  
 Lys Thr His His Ile Tyr Ile Ile Asn Asn Gly Arg Ile Asn Val Ser  
 370 375 380  
 Gly Ile Thr Lys Asn Asn Val Asp Tyr Ile Ala Asp Lys Ile Cys Leu  
 385 390 395 400  
 Ser Leu Ser Gln Ile  
 405

<210> 40  
 <211> 1188  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 40  
 Met Pro Lys Arg Thr Ile Tyr Met Trp Leu Val Phe Leu Phe Phe Phe  
 1 5 10 15  
 Leu Glu Leu Ala Lys Cys Gly Ile Pro Gly Leu His Lys Trp Val Ile  
 20 25 30  
 Asn Asn Phe Pro Ser Cys Val Lys Ile Val Asp Arg Asn Lys Leu Ile  
 35 40 45  
 Asp Trp Asn Cys Ile Gly Lys Leu Glu Lys Ala Lys Gly Lys His Lys  
 50 55 60  
 Arg Asn His Asn Gly Gly Asp Asn Asn Gly Asp Asn Asn Gly Asp Asn  
 65 70 75 80  
 Asn Tyr Asp Asp Asn Tyr Asp Asp Asn Asn Tyr Asn Asp Gly Cys Glu  
 85 90 95  
 Ile Asn Arg Asn Ile Lys Asn Lys Asp Asn Thr Tyr Asp Asn Asn Ile  
 100 105 110  
 Asn Asn Thr Tyr Asn Lys Tyr Asp Ile Asp Asp Asp Lys Lys Lys Ser  
 115 120 125  
 Phe Cys Lys Gly Lys Lys Tyr Lys Glu Glu Lys Ile Phe Glu Val Asp  
 130 135 140  
 Asn Leu Leu Phe Asp Leu Asn Gln Leu Leu His Lys Ala Asn Val Lys  
 145 150 155 160

Phe Ile Asn Tyr Asp Asn Tyr Phe Leu Lys Leu Thr Arg Leu Ile Lys  
 165 170 175  
 Asn Val Leu Lys Lys Phe Glu Pro Lys Lys Asn Val Val Phe Ala Ile  
 180 185 190  
 Asp Gly Ile Cys Pro Phe Ser Lys Leu Lys Leu Gln Ile Lys Arg Arg  
 195 200 205  
 Ala Lys Ser Lys Leu Lys Asn Lys Glu Asn His Leu Val Asn Asp Ile  
 210 215 220  
 Thr Cys Gly Ser Ile Phe Ile Asn Lys Ile Ser Lys Phe Leu Val Asn  
 225 230 235 240  
 Phe Leu Lys His Leu Leu Ser Phe Glu Lys Tyr Glu His Val Lys Phe  
 245 250 255  
 Phe Ile Ser Thr Asp Gln Glu Val Gly Glu Gly Glu Leu Lys Leu Met  
 260 265 270  
 Asn Trp Ile Ser Asn Tyr Val Lys Asn Ile Lys Asn Ile Lys Asn Ile  
 275 280 285  
 Lys Ile Asn Lys Asn Ile Gln Ile Lys Glu Asp Glu Lys Ile Asn Asn  
 290 295 300  
 Met Ile Glu Ile Lys Lys Glu Asn Ile Met Asn His Leu His Tyr Lys  
 305 310 315 320  
 Gln Glu Met Phe Asn Asp Ile Lys Asn Asp Asn Leu Lys Tyr Glu Glu  
 325 330 335  
 Lys Lys Lys Ile Arg Thr Asn Asn Lys Met Asn Asn Ser Thr Asn Tyr  
 340 345 350  
 Asp Ile Thr Asn Val Glu Glu Glu Ser Phe Val Ile Val Gly Ala Asp  
 355 360 365  
 Ala Asp Leu Leu Leu Gln Cys Leu Ser Leu Lys Asn Val His Asn Ile  
 370 375 380  
 Phe Ile Tyr Thr Tyr Gln Ile Phe Asn Val Glu Ile Asn Asp Asn Asn  
 385 390 395 400  
 Met Lys Lys Glu Asn Tyr Leu Met Lys Asn Lys Val Ile Lys Gly Asp  
 405 410 415  
 Pro Ile Phe Lys Glu Asp Lys Asn Asn Val Cys Lys Met Asn Gly Ala  
 420 425 430  
 Tyr Lys Lys Tyr Glu Asp Asp Ile Asp Ser Asp Asn Ile Gln Lys Asp  
 435 440 445  
 Ile Thr Arg Trp Ser Asn His Asn Asp Asn Ile Asn Tyr Asn Asn Asp  
 450 455 460  
 Asn Ile Asn Tyr Asn Asn Asp Asn Ile Asn Tyr Asn Asn Asp Asn Ile  
 465 470 475 480  
 Asn Tyr Asn Asn Asp Asn Ile Asn His Asn Asn Asp Asn Ile Asn Tyr  
 485 490 495  
 Asn Asn Asp Asn Ile Asn His Asn Asn Asp Asn Ile Asn Tyr Asn Asn  
 500 505 510  
 Asp Asn Ile Asn Tyr Asn Asn Asp Asn Ile Asn Tyr Asn Asn Ile Cys  
 515 520 525  
 Pro Thr Gly Asp Lys Asn His Ile Glu Lys Ile Leu Leu Lys Thr Gln

530					535					540									
Ser	Thr	Asn	Val	Gln	Asn	Val	Lys	Lys	Lys	Lys	Ile	Lys	Val	Leu	Tyr	545	550	555	560
Asn	Leu	Lys	Thr	Phe	Ile	Asn	Leu	Phe	Leu	Asn	Lys	Tyr	Pro	Lys	Trp	565	570	575	
Phe	His	Lys	Ile	Lys	Ala	Asp	Leu	Leu	Ile	Leu	Phe	Ile	Leu	Lys	Gly	580	585	590	
Asn	Asp	Tyr	Leu	Pro	Lys	Ile	Arg	Glu	Gly	Asn	Phe	Gly	Ile	Phe	Phe	595	600	605	
Glu	Ala	Tyr	Phe	Lys	Met	Leu	Glu	Asn	Ile	Lys	Asn	Arg	Asn	Asn	Cys	610	615	620	
Glu	Glu	Lys	Lys	Lys	Thr	Asp	Asp	Phe	Glu	Ile	Asn	Lys	Tyr	Asp	Asp	625	630	635	640
Leu	Gly	Glu	Arg	Glu	Tyr	Ser	Tyr	Asn	Asn	Thr	Tyr	Glu	Gly	Leu	Leu	645	650	655	
Asp	Gly	Asn	Asn	Tyr	Lys	Ile	Asn	Lys	Lys	Glu	Phe	Leu	Leu	Phe	Leu	660	665	670	
Asn	Glu	Val	Gln	Lys	Leu	Val	His	Phe	Thr	Asn	Ile	Tyr	Asn	Asn	Asn	675	680	685	
Asn	Ile	Arg	His	Tyr	His	Asn	Ser	Asn	Asp	Ile	Arg	Phe	Phe	Lys	Asn	690	695	700	
Asp	Lys	Lys	Met	Tyr	Met	Lys	Gln	Thr	Asn	Ser	Cys	Ser	Pro	Leu	Leu	705	710	715	720
Leu	Ile	Asn	Glu	Leu	Ile	Ser	Lys	Lys	Ile	Leu	Asp	Lys	Asp	Thr	Phe	725	730	735	
Thr	Ile	Asn	Val	Thr	Lys	Asn	Glu	Asn	Asp	Met	Phe	Gln	Cys	Asn	Leu	740	745	750	
Ile	Tyr	Phe	Lys	Asn	His	Lys	Arg	Tyr	Val	Tyr	Ser	Ser	Lys	Ser	Lys	755	760	765	
Lys	Lys	Lys	Asn	Ala	Met	His	Ile	Thr	Ser	Tyr	Asp	Phe	Leu	Asn	Glu	770	775	780	
His	Phe	Pro	His	Leu	Met	Lys	Tyr	Ile	Asp	Lys	Glu	Tyr	Phe	Glu	Lys	785	790	795	800
Asn	Met	Lys	Gln	Ser	Asp	Asn	Asn	Val	Glu	Ile	Leu	Asn	Asn	Asn	Glu	805	810	815	
Leu	Asn	Thr	Asn	Gln	Ile	Gln	His	Ile	Gln	Lys	Gly	Asp	Asn	Asn	Lys	820	825	830	
Cys	Asp	Asp	Val	Pro	Ile	Leu	Lys	Asn	Asn	Val	Lys	Cys	Tyr	Asn	Glu	835	840	845	
Tyr	Tyr	Asn	Asn	Ile	Gly	Gly	Asn	Asp	Lys	Val	Lys	Asn	Ser	Ile	His	850	855	860	
Met	Glu	Asn	Tyr	Ile	Lys	Asn	Phe	Tyr	Leu	Gln	His	Cys	Gln	Asp	Glu	865	870	875	880
Lys	Ile	Tyr	Lys	Glu	Glu	Met	Asp	Ile	Val	Glu	Asn	Tyr	Ile	Glu	Gly	885	890	895	
Ile	His	Trp	Leu	Val	Glu	Met	Tyr	Asn	Lys	Thr	Tyr	Cys	Ile	Asn	Phe	900	905	910	

Asn Phe Phe Tyr Lys Tyr Met Ser Ser Pro Ser Leu Leu Ser Leu Tyr  
 915 920 925  
 Tyr Tyr Leu Leu Ile Asn Arg Asp Asp Ile Tyr Asn Asn Met Lys Ser  
 930 935 940  
 Met Asp Tyr Cys Asn Asn Tyr Lys Asn Asn Tyr Met Glu Ile Ile Gln  
 945 950 955 960  
 Lys Ile Asn Leu Asn Ile Phe Arg Ser Asn Leu Glu Tyr Tyr Asp Phe  
 965 970 975  
 Ile Asn Phe Cys Val Asp Lys Tyr Asn Ser Leu Lys Arg Asn Ile Thr  
 980 985 990  
 Lys Ile Gly Thr Cys Arg Asn Lys Asp Thr Ser Tyr Asn Asp Glu Glu  
 995 1000 1005  
 Lys Ile Ile His Thr Asp Asp Lys Arg Tyr Asp Lys Arg Phe Ile Tyr  
 1010 1015 1020  
 Phe Lys Asn Ile Tyr Asn Ile Leu Phe Ser Asn Asn Ile Ile Ile Ile  
 1025 1030 1035 1040  
 Arg Asp Ser Ile Gln Lys Leu Asn Asp Val Leu Lys Ser Gln Val Tyr  
 1045 1050 1055  
 Asn Lys Arg Met Ile Asn Tyr Tyr Trp Asn Val Tyr Thr Lys Lys Pro  
 1060 1065 1070  
 Leu Lys Lys Phe Tyr Lys Ile Ile Phe Phe Lys Ala Gly Lys Met Phe  
 1075 1080 1085  
 Val Ser Lys Phe Ser Leu Phe Asn Leu His Ile Glu Gln Leu Lys Lys  
 1090 1095 1100  
 Lys Glu Asn Asn Gln Asn Tyr Ser His Asp Thr Asn Glu Glu Leu Cys  
 1105 1110 1115 1120  
 His Gln Lys Gly Gln Arg Asn Glu Glu Asp Asn Thr Tyr Asn Lys Met  
 1125 1130 1135  
 Ala Ile Arg Asn Asn Phe Leu His Ser Ile Phe Asn Asn Asn Lys Cys  
 1140 1145 1150  
 Ile Lys Thr Asn Arg Lys Phe Thr Thr Asn Ser Leu Arg Ser Val Asp  
 1155 1160 1165  
 Gly Lys Thr Lys Val Leu Lys Gly Val Phe Lys Arg Lys Ser Val Arg  
 1170 1175 1180  
 Trp Gln Tyr His  
 1185

&lt;210&gt; 41

&lt;211&gt; 504

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 41

Met Thr Lys Ser Ser Lys Asp Ile Cys Ser Glu Asn Glu Gly Lys Lys  
 1 5 10 15

Asn Gly Lys Ser Gly Phe Phe Ser Thr Ser Phe Lys Tyr Val Leu Ser  
 20 25 30

Ala Cys Ile Ala Ser Phe Ile Phe Gly Tyr Gln Val Ser Val Leu Asn  
 35 40 45



Thr Ile Lys Asn Phe Ile Val Val Glu Phe Glu Trp Cys Lys Gly Glu  
 50 55 60  
 Lys Asp Arg Leu Asn Cys Ser Asn Asn Thr Ile Gln Ser Ser Phe Leu  
 65 70 75 80  
 Leu Ala Ser Val Phe Ile Gly Ala Val Leu Gly Cys Gly Phe Ser Gly  
 85 90 95  
 Tyr Leu Val Gln Phe Gly Arg Arg Leu Ser Leu Leu Ile Ile Tyr Asn  
 100 105 110  
 Phe Phe Phe Leu Val Ser Ile Leu Thr Ser Ile Thr His His Phe His  
 115 120 125  
 Thr Ile Leu Phe Ala Arg Leu Leu Ser Gly Phe Gly Ile Gly Leu Val  
 130 135 140  
 Thr Val Ser Val Pro Met Tyr Ile Ser Glu Met Thr His Lys Asp Lys  
 145 150 155 160  
 Lys Gly Ala Tyr Gly Val Met His Gln Leu Phe Ile Thr Phe Gly Ile  
 165 170 175  
 Phe Val Ala Val Met Leu Gly Leu Ala Met Gly Glu Gly Pro Lys Ala  
 180 185 190  
 Asp Ser Thr Glu Pro Leu Thr Ser Phe Ala Lys Leu Trp Trp Arg Leu  
 195 200 205  
 Met Phe Leu Phe Pro Ser Val Ile Ser Leu Ile Gly Ile Leu Ala Leu  
 210 215 220  
 Val Val Phe Phe Lys Glu Glu Thr Pro Tyr Phe Leu Phe Glu Lys Gly  
 225 230 235 240  
 Arg Ile Glu Glu Ser Lys Asn Ile Leu Lys Lys Ile Tyr Glu Thr Asp  
 245 250 255  
 Asn Val Asp Glu Pro Leu Asn Ala Ile Lys Glu Ala Val Glu Gln Asn  
 260 265 270  
 Glu Ser Ala Lys Lys Asn Ser Leu Ser Leu Leu Ser Ala Leu Lys Ile  
 275 280 285  
 Pro Ser Tyr Arg Tyr Val Ile Ile Leu Gly Cys Leu Leu Ser Gly Leu  
 290 295 300  
 Gln Gln Phe Thr Gly Ile Asn Val Leu Val Ser Asn Ser Asn Glu Leu  
 305 310 315 320  
 Tyr Lys Glu Phe Leu Asp Ser His Leu Ile Thr Ile Leu Ser Val Val  
 325 330 335  
 Met Thr Ala Val Asn Phe Leu Met Thr Phe Pro Ala Ile Tyr Ile Val  
 340 345 350  
 Glu Lys Leu Gly Arg Lys Thr Leu Leu Leu Trp Gly Cys Val Gly Val  
 355 360 365  
 Leu Val Ala Tyr Leu Pro Thr Ala Ile Ala Asn Glu Ile Asn Arg Asn  
 370 375 380  
 Ser Asn Phe Val Lys Ile Leu Ser Ile Val Ala Thr Phe Val Met Ile  
 385 390 395 400  
 Ile Ser Phe Ala Val Ser Tyr Gly Pro Val Leu Trp Ile Tyr Leu His  
 405 410 415

Glu Met Phe Pro Ser Glu Ile Lys Asp Ser Ala Ala Ser Leu Ala Ser  
 420 425 430  
 Leu Val Asn Trp Val Cys Ala Ile Ile Val Val Phe Pro Ser Asp Ile  
 435 440 445  
 Ile Ile Lys Lys Ser Pro Ser Ile Leu Phe Ile Val Phe Ser Val Met  
 450 455 460  
 Ser Ile Leu Thr Phe Phe Phe Ile Phe Phe Phe Ile Lys Glu Thr Lys  
 465 470 475 480  
 Gly Gly Glu Ile Gly Thr Ser Pro Tyr Ile Thr Met Glu Glu Arg Gln  
 485 490 495  
 Lys His Met Thr Lys Ser Val Val  
 500

<210> 42  
 <211> 416  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 42  
 Met Ile Lys Cys Leu Lys Asn Asn Ile Asn Ile Trp Lys Arg Val Arg  
 1 5 10 15  
 Arg Asn Val Ser Tyr Gly Tyr Tyr Asn Ile Asn Ile Asn Glu Lys Ile  
 20 25 30  
 His Lys Tyr Phe Asp Asn Ile Asp Lys Lys Arg Asn Ile Lys Tyr Ile  
 35 40 45  
 Ser Asp Cys Lys Ser Cys Lys Glu Cys Val Asp Glu Ile Lys Asn Gly  
 50 55 60  
 Asn Tyr Asn Leu Leu Lys Asp Phe Asn Met Lys Met Ile Gly Leu Asp  
 65 70 75 80  
 Ile Glu Gly Tyr Lys Ile Gly Lys Tyr Gly Ile Val Ser Ile Ile Gln  
 85 90 95  
 Ile Cys Tyr Glu Asp Ile Tyr Ile Phe Asp Ile Tyr Lys Cys Asp Asn  
 100 105 110  
 Val Tyr Leu Phe Ile Asn Tyr Ile Lys Asp Ile Leu Glu Cys Asp Asp  
 115 120 125  
 Ile Ile Lys Val Thr His Asp Cys Arg Glu Asp Cys Ser Ile Leu Tyr  
 130 135 140  
 Asn Gln Tyr Asn Ile His Leu Lys Asn Ile Leu Asp Thr Gln Val Ala  
 145 150 155 160  
 Tyr Asn Leu Leu Leu Lys Asn Asn Asn Asn Tyr Thr Asn Thr Tyr Gln  
 165 170 175  
 Ile Ser Tyr Asp Asp Leu Leu Lys Lys Tyr Leu Phe Ile Asn Asn Asn  
 180 185 190  
 His Lys Ile Tyr Phe His Lys Met Ile Thr Leu Asp Asn Tyr Ile Tyr  
 195 200 205  
 Leu Lys Arg Pro Ile Met Lys Glu Leu Ile Ser Tyr Ala Ile Gln Asp  
 210 215 220  
 Val Ile Tyr Leu Lys Pro Leu Ile Leu Cys Ile Leu Asp Lys Phe Ile  
 225 230 235 240

Ile Lys Gln Lys Lys Lys Glu Glu Gln Glu Lys Asn Lys Tyr Val Asn  
245 250 255

Asp Lys Gln Asn Asn Lys Ile Lys Gln Glu Lys Phe Asp Lys Thr Ser  
260 265 270

Asn Thr Leu Gln Ser Lys Gly Asn Ile Ser Ser Phe Asn Asn Gln Asp  
275 280 285

Leu Tyr His Thr Lys Glu Ile Ile Gln Asp Ile Ile Leu His Ser Lys  
290 295 300

Lys Tyr Val Asn Tyr Gln Phe Leu Asn Ser His Ile Lys Asp Glu Lys  
305 310 315 320

Glu Leu Gln Lys Gly Met Ile Leu Glu Gly Met Val Val Ser Cys Asn  
325 330 335

Asn Thr Lys Met Tyr Leu Lys Leu Asn Met Arg Lys Arg Gly Val Ile  
340 345 350

Leu Asn Tyr Val Gln Asn Lys Tyr Glu Ile Gly Asp Ile Val Lys Ala  
355 360 365

Val Ile Val Asn Phe Thr Arg Asn Asp Tyr Ile Asn Leu Gly Leu Tyr  
370 375 380

Asp Glu Lys Ile Leu Thr Leu Asp Ala Gln Lys Tyr Ile Pro Arg Glu  
385 390 395 400

Glu Val Leu Gln Asn Ile Gln Lys Phe Leu Leu Asn Glu Glu Lys Ile  
405 410 415

<210> 43  
<211> 354  
<212> PRT  
<213> Plasmodium falciparum

<400> 43  
Met Lys Ile Thr Lys Ile Ile Asn Tyr Asn Asn Phe Lys Ile Thr Asn  
1 5 10 15

Val Trp Gly Gly Ile Ile Ser Lys Ala Ser His Phe Ser Thr Gln His  
20 25 30

Gly Gln Tyr Asp Lys Ser Glu Arg Ile Cys Asn Phe Gly Phe Gln Lys  
35 40 45

Val Ser Glu Glu Ile Lys Ser Arg Leu Val Tyr Asn Leu Phe Ser Asn  
50 55 60

Val Cys Asn Lys Tyr Asp Ile Met Asn Asp Met Met Ser Leu Leu Val  
65 70 75 80

His Arg Phe Trp Lys Asp Gln Phe Val Lys Glu Leu Asp Ile Leu Leu  
85 90 95

Lys Tyr His Ser Tyr Asn Ile Gln Asp Tyr Val Tyr Gln His Tyr Lys  
100 105 110

Asp His Ser Ser Asn Asn Glu Lys Ile Gln Lys Lys Asn Glu Asn Thr  
115 120 125

Ser Asp Thr Asn Gly Tyr Ser Asn Asn Tyr Ser Val Tyr Ser Asp Ile  
130 135 140

Pro Asn Tyr Lys Ile Leu Asp Leu Ala Gly Gly Thr Gly Asp Ile Ala  
 145 150 155 160  
 Phe Arg Ile Leu Glu Lys Ser Lys Phe Tyr Leu Lys Lys Asn Asn Gln  
 165 170 175  
 Ser Ile Pro Phe Asp His Ile Ser Tyr Gln Gln Tyr Leu Pro His Ile  
 180 185 190  
 Ile Val Cys Asp Val Asn Asn Asp Met Leu Asn Val Gly Lys Lys Lys  
 195 200 205  
 Ala Ala Thr Leu Gly Tyr Asp Gln Asn Leu Thr Trp Leu Val Gln Asn  
 210 215 220  
 Ala Glu Asn Leu Glu Ser Val Glu Ser Asn Ser Ile Asp Val Ile Thr  
 225 230 235 240  
 Leu Ser Phe Gly Ile Arg Asn Phe Thr Asn Ile Pro Gln Ala Leu Lys  
 245 250 255  
 Glu Ile His Arg Val Leu Lys Pro Gly Gly Arg Phe Leu Cys Leu Glu  
 260 265 270  
 Phe Ser Lys Val Gln Cys His Ile Phe Asn Ile Phe Tyr Lys Phe Tyr  
 275 280 285  
 Leu Asn Asn Val Ile Pro Ile Ile Gly Lys Val Val Ala Asn Asp Met  
 290 295 300  
 Lys Ala Tyr Lys Tyr Leu Ala Glu Ser Ile Gln Thr Phe Leu Thr Pro  
 305 310 315 320  
 Asp Glu Leu Ala Gln Leu Phe His Gln Ala Asn Phe Lys Asn Ile Thr  
 325 330 335  
 Tyr Thr Thr Met Thr Met Gly Ile Val Ser Ile His Ser Ala Tyr Lys  
 340 345 350  
 Leu Val

<210> 44  
 <211> 508  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 44  
 Met Gly Leu Pro Lys Asn Asn Lys Val Asn Phe Cys Tyr Gly Lys Asp  
 1 5 10 15  
 Tyr Arg His Ile Ser Arg Glu Leu Glu Arg Ile Asn Asn Ile Ile Leu  
 20 25 30  
 Lys Tyr Ser Lys Asn Ile Glu Thr Cys Asn Lys Asn Lys Lys Lys Cys  
 35 40 45  
 Leu Asp Glu Leu Tyr Ile Leu Ala Ser Tyr Asp Asn Phe Leu Lys Lys  
 50 55 60  
 Lys Tyr Glu Thr Tyr Glu Cys Lys Leu Asp Gly Tyr Ile Asn Glu Asp  
 65 70 75 80  
 Lys Glu Lys Ile Lys Ile Asn Glu Val Asn Lys Gly Arg Asn Lys Lys  
 85 90 95  
 Ile Asp Cys Thr Pro Asn Asn Asn Lys Ile Phe Phe Tyr Asn Val His  
 100 105 110

Leu Ile Asn Asp Asp Asp Leu Phe Lys Arg Arg Lys Asn Lys Lys Lys  
 115 120 125  
 Lys Lys Lys Met Ile Thr Leu Lys Ile Asn Lys Cys Asn His Lys Asp  
 130 135 140  
 Lys Asn Leu His Lys Asn Glu Met Lys Asp Gly Asp His Val Phe Ser  
 145 150 155 160  
 Tyr Thr Lys Lys Lys Trp Leu Asn Asn Asn Asn Asn Asn Asn Ile  
 165 170 175  
 Thr Asn Met Val Ser Phe Leu Gly Tyr Gly Asn Ile Lys Arg Lys Tyr  
 180 185 190  
 Val Thr Asn Lys Cys Ile Ile Asn Glu Gln Glu Asn Asn Lys Met Asp  
 195 200 205  
 Glu Asn Gln His Ile Asp Lys Asn Lys Asn Ile Asn Ile Asn Ile Asn  
 210 215 220  
 Leu His Asp Asp Lys Asn Asp Glu Ile Arg Lys His Ser Thr Ile Gln  
 225 230 235 240  
 Thr Leu Tyr His Ser Asn Asn Lys Glu Lys Ile Ile Ser Lys Asn Val  
 245 250 255  
 Leu Lys Asp Glu Ser Thr Asn Ile Thr Lys Glu Cys Asn Val Asn Lys  
 260 265 270  
 Tyr Asp Asp Asn Ile Ile Asp His Lys Gln Lys His Arg Glu Lys Glu  
 275 280 285  
 Lys Lys Lys Ser Ile Glu Asn Met Asn Ile Ser His Ile Ile Tyr Glu  
 290 295 300  
 Lys Glu Gln Ser His Asp Ile Cys Asn Val Leu Glu Glu Asn Lys Glu  
 305 310 315 320  
 Glu Glu Lys Tyr Asn Asn Leu Gln Lys Asp Val Ile Thr Asn Cys Asn  
 325 330 335  
 Asn Asp Lys Val Lys Leu Glu Glu Tyr His His Glu Lys Glu Leu Asn  
 340 345 350  
 Asn Val Gln Ile Ile Asn Asp Met Asp Ile Lys Lys Asn Glu Ala Lys  
 355 360 365  
 Lys Glu Lys Asn Asn Lys Lys Lys Glu Lys Gln Lys Asn Lys Lys Asn  
 370 375 380  
 Glu Lys Glu Lys Asn Lys Lys Lys Glu Lys Glu Lys Asn Lys Lys Lys  
 385 390 395 400  
 Glu Lys Glu Lys Asn Lys Lys Lys Glu Lys Glu Lys Ser Lys Lys Lys  
 405 410 415  
 Glu Lys Glu Lys Asn Lys Lys Lys Glu Lys Glu Lys Asn Lys Lys Lys  
 420 425 430  
 Glu Lys Glu Lys Asn Asn Gly Asp Val Leu Lys His Val Glu Asn Asn  
 435 440 445  
 Leu Gln Asp Val Glu Leu Leu Tyr Glu Glu Lys Ile Ile Asn Val Asn  
 450 455 460  
 Thr Lys Lys Asp Glu Glu Leu Ser Thr Lys Asn Lys Tyr Ser Glu Lys  
 465 470 475 480  
 Asp Ile Val His Asp Ile Leu Ser Glu Tyr Ser Asn Thr Leu Gln Tyr

485

490

495<sup>'''</sup>

Thr Ser Phe Leu Asp Tyr Met Lys Asn Arg Met Glu  
500 505

&lt;210&gt; 45

&lt;211&gt; 646

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 45

Met Ser Thr Ile Leu Asn Phe Val Lys Glu Gln Asn Lys Met Asn Thr  
1 5 10 15

Leu His Ile Lys Asn Phe Ile Met Glu Asn Leu Lys Val Thr Glu Glu  
20 25 30

Ile Lys His Asp Lys Asp Ile Asn Asn Leu Met Arg Arg Ile Glu His  
35 40 45

Glu Glu Ile Lys Glu Leu Ile Ser Ser Asn Gly Lys Arg Tyr Phe Met  
50 55 60

Glu Ile Arg Lys Ile Tyr Phe Leu Met Lys Lys Phe His Lys Glu Gly  
65 70 75 80

Tyr Phe Pro Ser Ser Asn Lys Asp Val Leu Lys Lys Gln Ser Phe Lys  
85 90 95

Arg Asn Lys Asn Ile Lys Asn Leu Leu Gln Glu Ser Ile Lys Lys Lys  
100 105 110

Asn Ile Gln Ile Gln Lys Leu Leu Lys Gln Tyr Ile Ile Leu Lys Gly  
115 120 125

Tyr Tyr Lys Asn Val Cys Lys Lys Tyr Arg Gln Glu Asn Glu Leu Leu  
130 135 140

Lys Ser Phe Phe Ser Phe Ser Asn Asn Gln Ser Tyr Tyr Leu Asn Leu  
145 150 155 160

Lys Tyr Ser Pro Pro His Ser Arg Arg Asn Arg Ile Tyr Phe Tyr Pro  
165 170 175

Tyr Thr Lys Leu Leu Arg Arg Lys Arg Leu Arg Arg Ile Ser His Phe  
180 185 190

Lys Glu Asp Arg Tyr Val Ile His Lys Gly Pro Leu Thr Lys Lys Lys  
195 200 205

Lys Lys Lys Ile Tyr Ile Asn Lys Lys Tyr Ile Tyr Ile Ile Tyr Ile  
210 215 220

Tyr Ile Tyr Ile Tyr Tyr Ile Phe Phe Met Phe Tyr Ser Phe Ile Phe  
225 230 235 240

Ile Glu Tyr Phe Ser Asn Ser Ile Phe Arg Lys Tyr Thr His His Lys  
245 250 255

Lys Arg Tyr Lys Glu Ile Ile Gln Asp Ile Leu Asn Asp Asn Lys Leu  
260 265 270

Leu Asn Leu His Phe Lys Arg Tyr Lys Glu Lys Tyr Lys Lys Lys Lys  
275 280 285

Lys Lys Lys Leu His Ile Ser Ser Lys Arg Lys Lys Asp Lys Arg Asn  
290 295 300

Leu Asp Leu Tyr Cys Lys Lys Lys Lys Glu Ile Ile Tyr Thr His

305                      310                      315                      320  
 Leu Phe Leu Pro Thr Arg Leu Arg Glu Lys Ile Asn Lys Ser Ser Asn  
    325                      330                      335  
 Tyr Asn Tyr Leu Asn Lys Glu Gly Glu Asn Ile Ile Asn Lys Glu Glu  
    340                      345                      350  
 Glu Asn Ile Leu His Lys Glu Glu Glu His Ile Leu His Lys Asp Glu  
    355                      360                      365  
 Glu Asn Tyr Met Lys Glu Glu Glu Glu Asn Ile Leu His Lys Asp Glu  
    370                      375                      380  
 Glu Glu Asn Ile Leu Tyr Lys Glu Glu Glu Asn Ile Leu His Lys Asp  
    385                      390                      395                      400  
 Glu Glu Glu Asn Ile Leu Tyr Lys Glu Glu Glu Asn Ile Leu His Lys  
    405                      410                      415  
 Asp Glu Glu Glu Asn Ile Leu His Lys Glu Glu Glu Asn Ile Leu His  
    420                      425                      430  
 Lys Asp Glu Glu Glu Asn Ile Leu Tyr Lys Glu Glu Glu Asn Ile Leu  
    435                      440                      445  
 His Lys Glu Glu Ala Asn Ile Ile Glu Thr Lys Asn Ala Glu Val Lys  
    450                      455                      460  
 Lys Lys Lys Asn Thr Leu Arg Lys Lys Lys Lys Lys Glu Lys Lys Asn  
    465                      470                      475                      480  
 Phe Leu Asn Asp His Met Lys Glu Val Thr Lys Asn Asp Asp Asp Asp  
    485                      490                      495  
 Asp Asp Asp Asp Asp Asp Asp Glu Asn Asn Met Ile Lys Val Glu Glu  
    500                      505                      510  
 Lys Gln Lys Tyr Asn Asp Glu Asp Gly Lys Glu Asn Val Ser Ile Asp  
    515                      520                      525  
 Asn Val Glu Glu Cys Asn Lys Met Lys Asp Glu Tyr Asp Lys Lys Glu  
    530                      535                      540  
 Asn Asn Val Ser Asn Ile Glu Glu Glu Asn Ile Ile Leu Asp Ser Lys  
    545                      550                      555                      560  
 Glu Gln Asn Ile Ile Leu Asp Thr Asn Lys Glu Lys Leu Ile Ser Lys  
    565                      570                      575  
 Glu Lys Lys Lys Lys Lys Ile Ser Arg Lys Ile Lys Lys Thr Lys Ile  
    580                      585                      590  
 Glu Asp Asn Lys Asp Ile Lys Glu Asn Glu Asn Phe Asn Glu Ile Tyr  
    595                      600                      605  
 Asp Glu Lys Asn Ile Gly Lys Lys Glu Glu Tyr Ile Ile Tyr Glu Glu  
    610                      615                      620  
 Lys Asn Lys Glu His Asn Val Ile Thr Gln Lys Asp Asn Ala Lys Met  
    625                      630                      635                      640  
 Asp Asn Ile Asp Glu Gln  
    645

&lt;210&gt; 46

&lt;211&gt; 483

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

<400> 46  
Met Glu Lys Lys Ile Asp Tyr Asn Ile Lys Arg Asp Asn Leu Phe Arg  
1 5 10 15  
Thr Asn Asn Val Asp Lys Lys Lys Gly Glu Glu Lys Lys Lys Asp Leu  
20 25 30  
Ile Ser Lys Lys Asn Lys Asn Lys Asp Asn Ser Pro Asn Asn Asn Asn  
35 40 45  
Lys Asn Asn Asp Lys Asn Asn Ile Lys Asn Asn Val Leu Lys Asn Asn  
50 55 60  
Ser Leu Phe Asn Asn Lys Lys Lys Lys His Tyr Leu Tyr Asp Val Asp  
65 70 75 80  
Lys Thr Leu Leu Asn Lys Asp Met Asn Cys Ile Asn Tyr Thr Tyr Lys  
85 90 95  
Asn Leu Asn Glu Gln Lys Gln Asn Ser Pro Asn Thr Ile Asn Val Asn  
100 105 110  
Ile Asn Asp Lys Asp Cys Asp Asp Asn Gln Lys Ile Met Asp Ile Phe  
115 120 125  
Ser Ile Glu Lys Lys Ile Lys Asn Lys Tyr Ile Pro Asn Lys Asn His  
130 135 140  
Met Asn Lys Tyr Asn Asn Asn Asn Asp Gln Asn Lys Ser Asp Asp Asn  
145 150 155 160  
Phe Val His Ser Ile Ile His Asp Thr Phe Leu Asn Thr Ser Leu Gln  
165 170 175  
Thr Thr His Lys Asn Thr Leu Thr Ser Ile Lys Ile Asn Lys Gly Val  
180 185 190  
Lys Lys Lys Thr Phe Thr His Lys Asp Lys Lys Tyr Tyr Asn Asp Asp  
195 200 205  
Asn Ile Lys Thr Lys Glu Asn Lys Lys Asn Lys Ile Asn Asn Asn Tyr  
210 215 220  
Thr Asn Asp Asp Asn Asn Tyr Asp Asn Asn Tyr Asp Asn Asn Tyr Asp  
225 230 235 240  
Asn Asn Asp Gly Gln Asn Ile Tyr Asn Val Asn Ile Lys Lys Asn Asn  
245 250 255  
Tyr Val Asn Ile Ser Ile Asn Thr His Leu Gln Asn Asn Asn Tyr Glu  
260 265 270  
Ile Lys Gly Asn His Lys Lys Glu Lys Ser Phe Lys Asp Cys Lys Lys  
275 280 285  
Glu Leu Tyr Thr Asn Val Lys Asp Lys Ile Thr Leu Gln His Lys Glu  
290 295 300  
Asn Lys Lys Tyr Ile Asp Asn Ser Ile Gln Ser Ile Leu Asn His Asn  
305 310 315 320  
Glu His Arg Ser Leu Gln Lys Asn Ile His Ile Tyr Asn Asn Lys His  
325 330 335  
Thr Gln Thr Asn Lys Ala Tyr Asn Ile Gln Glu Val His Asn Phe Ser  
340 345 350  
Ile Ile Tyr Ser Lys Gln Ile Leu Gln Thr Ala Leu Ile Gln Ile Thr  
355 360 365



Tyr Lys Gln Asn Val Asn Gln Met Lys Asn Lys Lys Glu Glu Ile Ile  
 370 375 380  
 Asn Asn Asp Gln Ile Asn Lys Leu Asn Phe Ser Ile Leu Thr Thr Arg  
 385 390 395 400  
 Gln Gln Asn Asn Leu His Ile Met Asn Thr Asn Lys Ser Ile His Gly  
 405 410 415  
 Val Leu Gln Ile Phe Asn Lys Ile Asn Thr Phe Ala Met Ser Asn Asn  
 420 425 430  
 Ile Ile Asn Ile Leu Ile Lys Lys Asn Val Glu Thr Tyr Asn Glu Val  
 435 440 445  
 Lys Lys Lys Lys Lys Lys Lys Lys Arg Lys Lys Lys Glu Arg Lys Lys  
 450 455 460  
 Lys Lys Lys Lys Lys Val Tyr Asp Tyr His Ile Cys Met Phe Pro Tyr  
 465 470 475 480  
 Ile Pro Ile

<210> 47  
 <211> 459  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 47  
 Met Gln Met Asn Glu Glu Asn Ile Ile Thr Arg Lys Ile Asn Cys Leu  
 1 5 10 15  
 Arg Ser Thr Tyr Glu Glu Lys Lys Leu Arg Tyr Asn Asp Asp Asp Met  
 20 25 30  
 Ile Asn Lys Asn Tyr Glu Glu Met Leu Asp Lys Ile Glu Glu Cys Ile  
 35 40 45  
 Lys Leu Arg Asn Gly Tyr Lys Ile Cys Phe Val Leu Lys Ile Ser Gln  
 50 55 60  
 Ile Pro Leu Asp Ile Tyr Val Ile Asp Asn Ile Asn Glu Asn Asp Val  
 65 70 75 80  
 Arg Arg Met Ile Lys Lys Lys Asn Ser Tyr Asn Asn Asn Ile Leu Lys  
 85 90 95  
 Pro Phe Glu Gln Leu Ile Leu Asp His Phe Asn Ile Ile Lys Ile Leu  
 100 105 110  
 Cys Asn Lys Asn Asn Ile Asn Trp Asp Thr Leu Ile Asn Thr Ser Cys  
 115 120 125  
 Lys Phe Leu Ser Thr Phe Leu Gln Ile Tyr Cys Asp Asn Leu Trp Leu  
 130 135 140  
 Leu Pro Tyr Leu Leu Thr Ile Cys Ser Phe Leu Asn Asn Ile Ser Thr  
 145 150 155 160  
 Leu Ala Asp Ser Tyr Ile Thr Ser Asn Lys Asn Asp Ile Tyr Asn Glu  
 165 170 175  
 Glu Asn Glu Asp Ile Asn Asn Lys Asn Lys Tyr Thr Ile Glu Val Leu  
 180 185 190  
 Asn Ser Ile Arg Gly Lys Ile Gly Ile Val Lys Gly Asp Ile Glu Lys  
 195 200 205

His Gly Gly Phe Val Ile Leu Met Phe Gln Ser Ile Lys Leu Cys Met  
 210 215 220  
 Lys Leu Asn Asn Met Gln Ile Thr Ser Ser Phe Leu Lys Ile Ile Asn  
 225 230 235 240  
 Ser Thr Asp Ile Asn Tyr Ser Tyr Ile Pro Thr Ser Phe Ile Val Leu  
 245 250 255  
 Phe Lys Asn Gln Leu Gly Lys Leu Tyr Leu Gln Lys Leu Glu Tyr Glu  
 260 265 270  
 Lys Ala Glu Ser Glu Phe Ile Trp Ala Phe Ser Asn Ser Asn Lys Ser  
 275 280 285  
 Lys Ile Glu Phe Arg Lys Ile Ile Leu Glu Ser Leu Ile Thr Ile Arg  
 290 295 300  
 Leu Asn Lys Gly Leu Tyr Pro Pro Lys Lys Leu Leu Gln Lys Tyr Lys  
 305 310 315 320  
 Leu Ser Ile Tyr Ile Asp Ile Ile Tyr Ser Ile Lys Arg Gly Asn Ile  
 325 330 335  
 Phe Leu Tyr Asn Asn Val Met Asn Asn Phe Ser Ser Tyr Phe Phe His  
 340 345 350  
 Lys Gly Leu Asn Glu Cys Ile Glu Gln Ile His Phe Ile Val Lys Arg  
 355 360 365  
 Asn Leu Ile Lys Ile Val Val Asp Trp Trp Asn Lys Met Val Gln Glu  
 370 375 380  
 Asn Asn Gln Gln Asn Lys Leu Tyr Lys Val Pro Ile Tyr Leu Phe His  
 385 390 395 400  
 His Ile Phe Lys Trp Ala His Ile Thr Gln His His Ser Tyr Leu Glu  
 405 410 415  
 Thr Ile Cys Ile Ile Thr Ser Leu Ile Leu Phe Arg Tyr Ile Asn Ala  
 420 425 430  
 Tyr Ile Ser Tyr Asp Asn Asn Ile Leu Val Leu Ser Lys Asn Asp Pro  
 435 440 445  
 Phe Pro Ser Leu Ser His Asn Gln Gly Pro Arg  
 450 455

<210> 48  
 <211> 132  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 48  
 Met Ala Asn Asn Ile Asn Gly Asp Ile Lys Asn Leu Asp Leu Gly Pro  
 1 5 10 15  
 Asp Phe Lys Asn Cys Lys Cys Leu Asn Leu Cys Glu Leu Gln Leu Ile  
 20 25 30  
 Leu Gly Asp Gln Leu Arg Leu Thr Ser Lys Arg Asn Glu Ala Gln  
 35 40 45  
 Ala Leu Ile Lys Ser Ser Tyr Asp Tyr Ala Asn Lys Phe Ala Ala Ile  
 50 55 60  
 Lys Asn Arg Ser Ser Ile Val Asp Ile Arg Thr Asn Leu Glu Arg Ile  
 65 70 75 80

Gly Asp Leu His Glu Tyr Glu Ile Ala Met Leu Val Asn Leu Leu Pro  
                             85                            90                            95

Lys Thr Ile Leu Glu Ala Arg Tyr Leu Ile Pro Ser Leu Ile Arg Leu  
                             100                            105                            110

Asn Asp Glu Thr Leu Asn Ser Ile Leu Glu His Leu Ile Ser Tyr Lys  
                             115                            120                            125

Met Tyr Val Ser  
                             130

<210> 49  
 <211> 635  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 49  
 Met Gly Phe Val Lys Ala Glu Glu Phe Ile Asn His Tyr Met Arg Val  
   1                            5                            10                            15

Asn Lys Glu Ile Lys Glu Leu Ser Asn Arg Lys Asn Glu Glu Phe Lys  
                             20                            25                            30

Phe Asn Ile Phe Ile Phe Tyr Tyr Asn Asn Ile Asp Ser Ile Cys Thr  
                             35                            40                            45

Glu His Ile Leu His Phe His Lys Asn Leu Lys Arg Glu Ile Asn Val  
                             50                            55                            60

Phe Ser Tyr Gly Val Glu Lys Lys Glu Asp Leu Ile Lys Phe Phe Asn  
   65                            70                            75                            80

Lys His Asn Asp Ile Tyr Ser Lys Asn Lys Asp Tyr Tyr Arg Asp Tyr  
                             85                            90                            95

Phe Phe Gln Val Ile Leu Ile Gly Ile Cys Ser His Ile Asn Thr Asp  
                             100                            105                            110

Thr Ser Ile Tyr Glu Asp Ile Glu Lys Phe Phe Ser Asn Leu Leu Ser  
                             115                            120                            125

Lys Thr Tyr Leu Gly Tyr Leu Lys Phe Phe Val Ile Asp Asn Lys Arg  
                             130                            135                            140

Pro Phe His Glu Ile Phe Phe Asn Asn Asp Lys Trp Glu Leu Val Leu  
  145                            150                            155                            160

Asn Glu Leu Glu His Asn Glu Ile Met Thr Ile Tyr Asn Asn Lys Lys  
                             165                            170                            175

Asn Asn Asp Lys Lys Lys Leu Tyr Ser Lys Phe Tyr Asp Asn Tyr Tyr  
                             180                            185                            190

Ile Val Lys Glu Glu Asn Lys Cys Leu Ser Leu Met Val Tyr Pro Phe  
                             195                            200                            205

Ile Gln Cys Ala Gly Glu Asp Asp Ala Ser Ala Ile Ile Phe Ile Ser  
                             210                            215                            220

Ser Ile Ser Leu Met Ser Tyr Leu Lys Thr Glu Gln Ile Thr Tyr Asp  
  225                            230                            235                            240

Tyr Tyr Asn Lys Glu Ile Lys Asn Leu His Asn Asp Ser Leu Asn Ile  
                             245                            250                            255

Ser Asn Gly His Phe Leu Ser Phe Asp Ser Glu Arg Gly Leu Leu Pro  
                             260                            265                            270

Met Leu Ser Phe Ile Ser Leu Asn Glu Ala Leu Glu Ile Asp Glu Arg  
 275 280 285  
 Ile Tyr Ile Tyr Asp His Lys Asn Val Lys Asn Thr Phe Asn Gln Ile  
 290 295 300  
 Arg Thr Met Cys His Ile Glu Ile Lys Asp Phe Thr Gly Asn Phe Arg  
 305 310 315 320  
 Gln Leu Asp Leu Lys Lys Gln Asn Glu Ile Leu Ile Lys Leu Lys Asn  
 325 330 335  
 Phe Ile Lys Ile Ile Lys Pro Met Asn Thr Leu Ala Trp Lys Arg Arg  
 340 345 350  
 Thr Tyr Val Leu Tyr Asn Ser Asp Ser Phe Tyr Phe Leu Ile Ile Leu  
 355 360 365  
 Ile His Ile Tyr Ile Asn Arg Ile Lys Lys Met Asp Thr Tyr Leu Tyr  
 370 375 380  
 Asn Cys Leu Lys Thr Ser Asp Phe Leu Tyr Asn Ile Tyr Lys Asp Arg  
 385 390 395 400  
 Leu Lys Gln Ser Glu Ile Tyr Asp Lys Leu Ile Glu Lys His Leu His  
 405 410 415  
 Lys Asn Ala Ala Asn Tyr Leu Ser Ile Leu Ile Lys Lys Val Met Glu  
 420 425 430  
 Ser His Lys Lys Ser Ile Thr Ile Thr Ser Thr Phe Lys Ile Tyr Met  
 435 440 445  
 Asp Ile Phe Gln Thr Pro Arg Asn Ser Tyr Thr His Pro Phe Glu Leu  
 450 455 460  
 Lys Leu Ile Ser Asn Met Phe Ser Ser Phe Gln Ser Tyr Cys Val Asp  
 465 470 475 480  
 Lys Tyr Lys Thr Tyr His Leu Ile Val Cys Asn Ile Ile Asp Ser Asp  
 485 490 495  
 Asp Thr Ile Leu Tyr Gly Phe Ala Pro Leu Asn Lys Arg Asp Tyr Trp  
 500 505 510  
 Pro Leu Ile Phe Ser Lys Ile Ala Tyr Thr Asn Ala Glu Gln Ile Asn  
 515 520 525  
 Tyr Asp Thr Leu Thr Asp Val Asn Thr Ile Lys Ile Arg Lys Thr Asp  
 530 535 540  
 Leu Lys Phe Leu Leu Asp Glu Ile Lys Asp Val Phe Arg Gly Ile Ile  
 545 550 555 560  
 Lys His Asp Tyr Lys Lys Glu Leu Gln Ala Asn Leu Lys Gly Asn His  
 565 570 575  
 Asp Asp Glu Asp Glu Asp Glu Glu Asp Asp Glu Glu Asn Glu Glu Gln  
 580 585 590  
 Glu Leu Glu Glu Asp Asp Ile Ile Glu Glu Asp Leu Leu Gly Asp Gln  
 595 600 605  
 Gln Asp Glu Asp Leu Met Asp Gln Asn Ala Asn His His Glu Ile His  
 610 615 620  
 Glu Asp Asp Asp Asn Glu His Thr Glu Pro Asn  
 625 630 635

<210> 50  
 <211> 92  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 50  
 Met Asn Glu Leu Leu Asn Ser Asn Ala Thr Ile Ile Cys Asn Asn Ile  
     1                    5                    10                    15  
 Pro Ile His Ile Asn Arg Phe Glu Ile Thr Glu Ile Phe Ser Lys Tyr  
                     20                    25                    30  
 Gly Pro Leu Leu Gly Gln Gly Ile Tyr Phe Gly Lys Lys Asn Ser Asn  
                     35                    40                    45  
 Phe Phe Phe Val Lys Tyr Val His Leu Lys Asp Ala Ile Lys Ala Tyr  
                     50                    55                    60  
 Glu Glu Cys Glu His Asp Phe Lys Leu Ser Phe Ser Lys Asn Asp Glu  
                     65                    70                    75                    80  
 Ile Lys Tyr Lys Ala Leu Lys Gly Asn Ser His Lys  
                     85                    90

<210> 51  
 <211> 959  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 51  
 Met Thr Ala Glu Asp Lys Lys Val Asn Ser Lys Val Arg Lys Leu Asn  
     1                    5                    10                    15  
 Asn Ser Lys Ile Lys Lys Glu Glu Leu Asn Glu Glu Glu Lys Lys Lys  
                     20                    25                    30  
 Lys Glu Glu Leu Glu Leu Leu Ile Thr Arg Leu Arg Asp Glu Asp Val  
                     35                    40                    45  
 Asn Val Val Asn Leu Ser Ile Ser Leu Leu Asn Lys Glu Ile Ile Asp  
                     50                    55                    60  
 Thr Ser Gly Ile Leu Thr Ser Ser Leu Leu Ala Leu Lys Val Leu Lys  
                     65                    70                    75                    80  
 Thr His Tyr Asn Thr Leu Ile Glu Ile Phe Asn Glu Met Ile Phe Glu  
                     85                    90                    95  
 Glu Cys Lys Lys Lys Leu Ser Asn Met Ile Ser Ala Leu Ser Thr Thr  
                     100                    105                    110  
 Ile Gly Asp Glu Asn Asn Ile Val Lys Phe Val Ile Thr Gly Asn Lys  
                     115                    120                    125  
 His Asp Leu Ile Asn Tyr Gly His Glu Tyr Ile Lys Asn Leu Ile Thr  
                     130                    135                    140  
 Lys Leu Leu Val Glu Tyr Lys Ile Leu Lys Glu Glu Glu Asn Asn Gln  
                     145                    150                    155                    160  
 Asn Gly Leu Thr Thr Thr Ser Thr Thr Ser Asn Lys Leu Val Thr Ile  
                     165                    170                    175  
 Asn His Ile Tyr Asp Ile Val Asn Ile Val Val Pro Tyr Cys Phe Ala  
                     180                    185                    190  
 His Asn Thr Glu Tyr Glu Ala Ile Asp Leu Leu Ile Glu Val Asp Lys  
                     195                    200                    205

Ile Asn Asp Ile Tyr Leu Tyr Val Asp Glu Lys Ser Cys Asp Arg Ser  
 210 215 220  
 Ile Leu Tyr Leu Leu Asn Leu Thr His Tyr Ser Ser Ser Thr Asp Glu  
 225 230 235 240  
 Tyr Tyr Lys Leu Met Asp Val Ile Leu Asn Ile Leu Lys Lys His Asn  
 245 250 255  
 Lys His Val Glu Cys Leu Lys Ile Leu Leu Arg Leu Asn Lys Ile Asp  
 260 265 270  
 Lys Ile Lys Asp Leu Ile Phe Glu Cys Asn Asp Ile Leu Ile Cys Lys  
 275 280 285  
 Gln Ile Ala Leu Ile Cys Ser Arg His Cys Val His Ile Gln Phe Thr  
 290 295 300  
 Glu Glu Glu Ile Lys Lys Tyr Thr His Leu Asn Leu Asn Glu Ile Ser  
 305 310 315 320  
 Thr Leu Thr Ser Gly Glu His Leu Ser Pro Ile Phe Leu Lys Leu Ala  
 325 330 335  
 Lys Asp Leu Asp Val Glu Glu Pro Lys Leu Pro Glu Asp Val Tyr Lys  
 340 345 350  
 Ser His Leu Glu Glu Lys Arg Asn Thr Thr Val Trp Asp Ser Ala Lys  
 355 360 365  
 Gln Asn Leu Ser Ser Thr Phe Val Asn Ala Phe Val Asn Ala Ala Phe  
 370 375 380  
 Cys Lys Asp Lys Leu Met Thr Val Asn Ser Ser Leu Trp Ile Phe Lys  
 385 390 395 400  
 Asn Lys Asp Tyr Gly Leu Met Ser Ala Thr Ala Ser Met Gly Leu Leu  
 405 410 415  
 Leu Met Trp Asn Leu Asp Glu Gly Leu Ser Gln Ile Asp Lys Phe Gln  
 420 425 430  
 Tyr Ser Ser Asp Gln Tyr Val Lys Ala Gly Ala Leu Met Ala Phe Gly  
 435 440 445  
 Leu Ala Cys Thr Asn Ile Lys Asn Glu Cys Asp Pro Ala Tyr Ala Leu  
 450 455 460  
 Leu Ser Glu His Ile Asp Ala Glu Asn Ala Leu Glu Lys Met Gly Ala  
 465 470 475 480  
 Ile Leu Gly Phe Gly Tyr Ala Tyr Ala Gly Thr Asn Arg Glu Asn Leu  
 485 490 495  
 Leu Asp Ile Leu Ile Pro Pro Leu Val Asp Asn Gly Cys Ile Ile Glu  
 500 505 510  
 Cys Ser Val Tyr Ala Ala Leu Ser Leu Gly Leu Val Phe Val Gly Ser  
 515 520 525  
 Gln Asn Arg Glu Ile Ala Glu Tyr Ile Ile Asp Thr Val Leu Glu Lys  
 530 535 540  
 Glu Lys Ile Asn Asn Ser Leu Asp Thr Pro Ile Ala Lys Leu Tyr Ala  
 545 550 555 560  
 Val Ala Leu Gly Leu Leu Phe Leu Cys Ser Arg Glu Lys Cys Glu Ala  
 565 570 575

Thr Leu Ser Ala Leu Glu Ile Ile Lys His Pro Ile Ser Lys Tyr Met  
 580 585 590  
 Ile Ala Thr Val Glu Gly Met Ala Phe Ala Gly Ser Asn Asp Val Leu  
 595 600 605  
 Lys Val Gln Lys Met Leu Gln Val Leu Val Glu Lys Arg Gly Asp Lys  
 610 615 620  
 Lys Asn Asn Ser Asp Asn Lys Thr Thr Thr Ala Asn Asn Thr Asp Asn  
 625 630 635 640  
 Asn Lys Ser Ser Asn Ala Asp Ile Asn Lys Thr Thr Thr Thr Asp Thr  
 645 650 655  
 Ser Lys Lys Thr Asp Asn Asn Asn Asn Asn Ser Ser Ser Asn Asn Lys  
 660 665 670  
 Asn Thr Lys Ser Asn Glu Glu Lys Ser Ser Ser Ser Lys Asn Tyr Val  
 675 680 685  
 Glu Asp Asn Leu Asp Gln Cys Val Ala Ile Leu Asn Ile Ala Leu Ile  
 690 695 700  
 Ala Leu Thr Asp Asp Ile Ser Ser Asp Met Thr Thr Arg Ile Ile Asp  
 705 710 715 720  
 His Phe Leu Gln Tyr Ser Asn Val Asn Gln Lys Lys Ala Val Pro Leu  
 725 730 735  
 Ala Leu Ala Leu Leu Phe Thr Ser Phe Pro Lys Pro Asn Ile Val Asp  
 740 745 750  
 Ile Leu Ser Lys Leu Thr His Asp Gln Asp Pro Asp Val Ala Leu His  
 755 760 765  
 Ala Ile Ile Ser Leu Gly Phe Val Gly Ala Gly Thr Asn Asn Ser Arg  
 770 775 780  
 Ile Ala Ile Leu Leu Arg Gln Leu Ser Ala Phe Tyr Cys Lys Asp Thr  
 785 790 795 800  
 Asn Ala Ile Phe Val Val Arg Leu Ala Gln Gly Leu Leu Tyr Met Gly  
 805 810 815  
 Lys Gly Leu Leu Thr Ile Asn Pro Leu His Ser Asn Arg Ser Ile Ile  
 820 825 830  
 Asn Tyr Val Ser Leu Gly Ser Leu Leu Ile Thr Ile His Ala Cys Leu  
 835 840 845  
 Gln Leu Lys Ser Thr Ile Leu Gly Lys Tyr His Tyr Leu Leu Tyr His  
 850 855 860  
 Leu Val Pro Cys Ile Tyr Pro Arg Met Leu Val Thr Val Asn Glu Lys  
 865 870 875 880  
 Leu Glu Ser Leu Pro Val Ser Val Arg Val Gly Gln Ala Val Asp Ile  
 885 890 895  
 Val Gly Gln Ala Gly Lys Pro Lys Thr Ile Thr Gly Phe Gln Thr His  
 900 905 910  
 Val Thr Pro Val Leu Leu Ser His Thr Asp Arg Ala Glu Met Ala Thr  
 915 920 925  
 Glu Glu Cys Lys Asp Tyr Ile Ser Val Asn Asp Thr Leu Glu Gly Ile  
 930 935 940  
 Val Ile Leu Lys Lys Asp Pro Asn Tyr Ile Pro Pro Ser Ile Asn

945

950

955

&lt;210&gt; 52

&lt;211&gt; 1516

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 52

Met Gly Val Lys Gly Leu Trp Ser Ile Val Ser Pro Val Gly Val Arg  
 1 5 10 15

Val Asn Pro Glu Ile Phe Thr Gly Lys Arg Ile Ala Ile Asp Val Ser  
 20 25 30

Ile Trp Leu Tyr Glu Leu Thr Tyr Ala Asn Asn Val Lys Asp Leu Arg  
 35 40 45

Asn Lys Ser Phe Asp Asn Met Ser Ile Phe Asn Asp Leu Trp Ile Asp  
 50 55 60

Phe Ser Glu Asn Ile Ser Ser Glu Ile Lys Thr Asp Asn Ile Lys Lys  
 65 70 75 80

Ala His Leu Tyr Phe Phe Phe Leu Arg Ile Cys Lys Leu Leu Tyr Tyr  
 85 90 95

Asn Ile Arg Pro Ile Phe Ile Phe Asp Gly Asn Pro Pro Glu Leu Lys  
 100 105 110

Arg Lys Thr Ile Phe Gln Arg Asn Ile Lys Lys Arg Asn Tyr Glu Glu  
 115 120 125

Lys Phe Lys Lys Thr Ala Glu Lys Leu Val Tyr Asn Tyr Tyr Gln Arg  
 130 135 140

Thr Leu Leu Asn Ser Met Lys Ser Lys Asn Lys Lys Asn Asp Asn Ser  
 145 150 155 160

Asn Asn Ile Glu Asp Lys Thr Asn Thr Pro Asn Lys Thr Asn Thr Gln  
 165 170 175

Asn Lys Ser Asn Thr Gln Asn Lys Ser Asn Thr Pro Asn Lys Ile Asn  
 180 185 190

Ala Asp Ile Ser Lys Ser Ser Leu Ile Gln Ile Tyr Asp Asp Ile Lys  
 195 200 205

Glu Lys Asp Lys Ser Leu Asn Ser Leu Val Glu His Val Gly Asn Val  
 210 215 220

Pro Val Ser Val Lys Asp Val Leu Thr Ile Cys Asn Asp Asp Leu Ser  
 225 230 235 240

Lys Ile Lys Asn Lys Ile Phe Met Ile Thr Asp Phe Gly Pro Val Leu  
 245 250 255

Phe Leu Gly Glu Gln Asp Gly Asp Met Gly Thr Val Glu Asn Ile Asn  
 260 265 270

Lys Leu Asp Asn Arg Asn Lys Asp Glu Asn Asn Leu Ser Tyr Ser Ile  
 275 280 285

Asn Tyr Asn Lys Val Gln Asp Val Asn Asn Asn Asn Asp Asp Asp Lys  
 290 295 300

Asp Lys Asp Lys Glu Asn Ile Asn Glu Val Arg Arg Asp Gln Lys Asn  
 305 310 315 320

Tyr Val Tyr Lys Asn Lys Glu Asn Ile Asn Asn Ile Tyr Leu Asp Asp



325										330					335 <sup>F</sup>				
Asp	Asp	Glu	Lys	Glu	Asp	Ile	Gln	Asn	Lys	Asn	Gly	Val	Tyr	Asn	Asn				
			340					345					350						
Asp	Asp	Ile	Asp	Glu	Gln	Ile	Ile	Arg	Lys	Lys	His	Met	Ala	Arg	Lys				
		355					360					365							
Lys	Tyr	Tyr	Glu	Ser	Ile	Pro	Lys	Thr	Phe	Lys	Gly	Phe	Leu	Cys	Met				
	370					375					380								
Arg	Arg	Pro	Val	Asp	Ile	Ile	Asp	Ile	Ser	Asn	Tyr	Asn	Thr	Glu	Met				
385					390					395					400				
Leu	Glu	Ile	Ser	Glu	Thr	Leu	Lys	Val	His	Glu	Asn	Lys	Phe	Lys	Gln				
				405					410					415					
His	Leu	Asn	Val	Leu	Asp	Glu	Asn	Asn	Ser	Thr	Pro	Val	Val	Asn	Met				
			420					425					430						
Asn	Leu	Leu	Lys	Asn	Ile	Asn	Tyr	Lys	Lys	Asn	Asp	Asp	Leu	Ile	Glu				
		435					440					445							
Gly	Gly	Glu	Lys	Lys	Ser	Phe	Ile	Asn	Leu	Ile	Asn	Val	Asp	Ser	Cys				
	450					455						460							
Tyr	Ser	Ser	Ser	Asn	Ser	Arg	Leu	Glu	Asn	Asp	Glu	Asn	Ile	Glu	Arg				
465					470					475					480				
Gly	Lys	Ile	Asn	Met	Phe	Ile	Thr	Asn	Asp	Glu	Lys	Ser	Ile	Asn	Ile				
				485					490					495					
Asn	Asn	Tyr	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asp				
			500					505						510					
Asn	Asn	Met	Asp	Asn	Asn	Asp	Val	Ile	Ile	Glu	His	Asn	Lys	Asn	Asn				
		515					520					525							
Met	Asn	Ile	Tyr	Asp	Asn	Lys	Tyr	Asn	Val	Glu	Cys	Ser	Ser	Glu	Lys				
	530					535					540								
Ile	Asn	Asp	Asn	Gly	Ile	Ser	Asn	Lys	Asn	Ile	Asn	Ile	Leu	Glu	Leu				
545					550					555					560				
Pro	Asn	Asn	Leu	Asp	Thr	Ser	Asn	Ile	Phe	Leu	Glu	Gly	Lys	Asp	Glu				
				565					570					575					
Tyr	Lys	Val	Tyr	Tyr	Val	Asn	Lys	Glu	Glu	Ile	Arg	Ile	Pro	Leu	Phe				
			580					585					590						
Lys	Glu	Ile	Asn	Lys	Glu	Ile	Phe	Glu	Lys	Leu	Pro	Leu	Lys	Leu	Gln				
		595					600					605							
Tyr	Gln	Ile	Leu	Gln	Asp	Ile	Lys	Glu	Glu	Trp	Tyr	Thr	Asp	Asn	Arg				
	610					615					620								
Ile	Lys	Ala	Ile	Lys	Ser	Lys	Asp	Asp	Met	Asp	Val	Phe	Ser	Gln	Val				
625					630					635					640				
Gln	Leu	Glu	Thr	Tyr	Val	Arg	Met	Ile	Lys	Thr	Asp	Phe	Glu	Ile	Glu				
				645					650					655					
Lys	Leu	Lys	Ile	Lys	Met	Ala	Glu	Asn	Ile	Gln	Ser	Val	Glu	Gly	Glu				
			660					665					670						
Leu	Leu	Ile	Asn	Lys	Asp	Leu	Ser	Lys	Asn	Thr	Asp	Asn	Ile	Asn	Ile				
		675					680					685							
Lys	Asp	Tyr	Asn	Val	Leu	Gln	Lys	Lys	Lys	Ser	Lys	Lys	Lys	Lys	Lys				
	690					695					700								

Lys Phe Leu Asn Asp Ile Leu Asn Thr Tyr Asn Phe Thr Thr Glu Ser  
 705 710 715 720  
 Lys Tyr Gln Asp Leu Tyr Val Lys Gly Glu Glu Ser Lys Glu Asp Ile  
 725 730 735  
 Lys Asn Gln Ile Asp Phe Val Thr Gln Glu Cys Tyr Arg Asn Asn Asp  
 740 745 750  
 Ile Ile Arg Asp Thr His Asp Lys Ser Asp Ile Phe Lys Asn Ile Lys  
 755 760 765  
 Ile Asp Asn Asn Lys Lys Tyr Glu Ile Tyr Asn Leu Glu Leu Glu Gln  
 770 775 780  
 Glu Glu Ile Asn Glu Lys Lys Asn Tyr Asn Lys Asn Asn Asp Ser  
 785 790 795 800  
 Asn Lys Thr Phe Phe Leu Lys Ile Glu Asn Glu Phe Lys Lys Asp Leu  
 805 810 815  
 Leu Leu Asp Asp Ser Gln Ile Phe Gly Asp Ser Leu Leu Ala Asp Ile  
 820 825 830  
 Lys Glu Tyr Asn Tyr Thr Ala Asp Asn Leu Asp Asn Asn Asn Glu Asn  
 835 840 845  
 Lys Ser Leu Tyr Glu Asp Gly Glu Asn Phe Ile Thr Arg Asn Glu Pro  
 850 855 860  
 Ile Thr Asn Glu Tyr Glu Glu Lys Asn Asn Ile Ile Tyr Ile Ser Asp  
 865 870 875 880  
 Glu Gln Lys Tyr Asn Glu Glu Asp Ile Ile Phe Lys Asp Lys Ile Lys  
 885 890 895  
 Glu Lys Glu Lys Asn Asn Asp Thr Ser Ser Asp Asp Phe Glu Asn Cys  
 900 905 910  
 Ser Val Gln Glu Lys Ile Tyr Val Asn Glu Lys Ile Glu Glu Tyr Asn  
 915 920 925  
 Asn Lys Asn Asp Asp Lys Ser Ser Ser Ser Ser Ile Ile Leu Glu  
 930 935 940  
 Glu Ile Lys Tyr Lys Lys Glu Lys Lys Asp Glu Leu Val Ser Pro Asn  
 945 950 955 960  
 Leu Cys Val Leu Leu Asp Glu Phe Glu His Ser Asn Asp Leu Glu Asn  
 965 970 975  
 Asn Tyr Ile Ser Val Ser Ser Asp Asp Met Lys Thr Asn Val Ser Lys  
 980 985 990  
 Asn Asn Ile Thr Gly Val Lys Glu Asn Lys Val Asp Lys Thr Asn Val  
 995 1000 1005  
 Glu Tyr Asp Lys Lys Gly Asp Asp Gly Val Ile Glu Ile Ser Phe Glu  
 1010 1015 1020  
 Asp Ser His Lys Leu Glu Glu Ser Lys Phe Asp Asp Asn Asn Asn Ile  
 1025 1030 1035 1040  
 Tyr Asp Asn Asp Asp Glu Leu Glu Lys Asn Leu Ser Lys Asp Tyr Ile  
 1045 1050 1055  
 Ser Asp Val Asp Lys Asn His Val Asn Asn Ile Tyr Asn Ile Glu Arg  
 1060 1065 1070

Gly Glu Asp Glu Arg Glu Asn Glu Phe Val Glu Asn Lys Ile Gln Ser  
 1075 1080 1085

Thr Glu Ser His Lys Ser Asn Glu Phe Ile Cys Thr Glu Asn Lys Ser  
 1090 1095 1100

Leu Arg Lys Gln Tyr Met Ser Lys Glu Asp Ile Ser Asn Val Arg Ile  
 1105 1110 1115 1120

Leu Lys Ser Asp Asp Ile Asn Asn Leu Ser Lys Gln Asn Tyr Phe Glu  
 1125 1130 1135

Ile Leu Leu Asp Lys Lys Gln Val Met Asp Asn Phe Gln Met Asn Ile  
 1140 1145 1150

Glu Gln Asn Asn Asp Lys Leu Lys Glu Asp Lys Leu Asp Glu Gly Ala  
 1155 1160 1165

Tyr Phe Glu Tyr Leu Glu Asp Asn Lys Ile Ile Asp Ser Tyr Ile Lys  
 1170 1175 1180

Glu Thr Asn Lys Glu Asn Glu Glu Leu Ile Lys Glu Tyr Lys Lys Leu  
 1185 1190 1195 1200

Lys Lys Asn Asn Ile Glu Ile Asn Asp Glu Met Asn Asp Asp Ile Lys  
 1205 1210 1215

Leu Leu Leu Asn Phe Phe Gly Ile Pro Tyr Ile Gln Ser Pro Cys Glu  
 1220 1225 1230

Ala Glu Ala Gln Cys Ser Tyr Leu Asn Asn Lys Asn Tyr Cys Asp Ala  
 1235 1240 1245

Ile Ile Ser Asp Asp Ser Asp Val Leu Val Phe Ser Gly Lys Thr Val  
 1250 1255 1260

Ile Lys Asn Phe Phe Asn Lys Lys Lys Thr Val Glu Val Tyr Glu Lys  
 1265 1270 1275 1280

Lys Ala Ile Glu Glu Lys Leu Gly Leu Tyr Gln Glu Glu Leu Ile Asn  
 1285 1290 1295

Ile Ser Leu Leu Cys Gly Cys Asp Tyr Thr Ile Gly Val His Gly Ile  
 1300 1305 1310

Gly Ile Val Asn Ala Leu Glu Ile Ile Lys Ala Phe Pro Asn Phe Glu  
 1315 1320 1325

Asp Leu Lys Ile Leu Lys Asp Ile Val Ser Asn Pro Phe Arg Lys Ile  
 1330 1335 1340

Asp Lys Asn Met Tyr Asn Glu Glu Ile Gln Gln Phe Leu Asn Thr His  
 1345 1350 1355 1360

Lys Asn Tyr Lys Leu Asn Trp Ile Phe Pro Asn Asn Phe Pro Asp Arg  
 1365 1370 1375

Glu Val Tyr Lys Cys Phe Lys Tyr Pro Lys Val Cys Thr Asp Ile Lys  
 1380 1385 1390

Lys Phe Glu Trp His Val Pro Asp Ile Lys Ser Ile Thr Lys Phe Leu  
 1395 1400 1405

His Lys Thr Thr Asn Ile Ser Glu Glu Lys Val Leu Asn Val Leu Asn  
 1410 1415 1420

Pro Ile Leu Gln Lys Tyr Asn Val Asn Val Arg Thr Tyr Gln Ser Lys  
 1425 1430 1435 1440

Ile Glu Asp Phe Phe Pro Leu Leu Glu Lys Lys Arg Lys Thr Val Asp

1445 1450 1455

Asp Leu Ile Asp His Ile Arg Ala Asn Asn Lys Gln Lys Arg Gln Lys  
1460 1465 1470

Asn Lys Thr Val His Leu Asp Ser Lys Ile Ser Pro Leu Ile Asp Ile  
1475 1480 1485

Asn Pro Ala Gly Ile Ile Lys Ser Lys Arg Met Ser Ser Ala Leu Asp  
1490 1495 1500

His Ile Lys Arg Arg Lys Ser Ser Lys Lys Lys Lys  
1505 1510 1515

<210> 53  
<211> 133  
<212> PRT  
<213> Plasmodium falciparum

<400> 53

Met Gly Lys Lys Ile Ser Ser Met Pro Asp Lys His Lys Ile Arg Gln  
1 5 10 15

Asn Gln Val Leu Gly Cys Gln Ser Val Val Tyr Ile Tyr Pro Lys Val  
20 25 30

Glu Glu Asn Glu Asp Lys Lys Lys Val Ile Asn Thr Val Leu Ser Leu  
35 40 45

Leu Tyr Ile Tyr Ile Tyr Asn Ile Phe Phe Leu Asn Met Tyr Ser Leu  
50 55 60

Asp Gly Leu Leu Thr Lys Gly Ile Val Tyr Ile Leu Thr Asp Gly Leu  
65 70 75 80

Ser Gly Tyr Met Pro Glu Asp Ile Leu Lys Val Asn Pro Asn Phe Ile  
85 90 95

Thr Leu Thr Gly Ile Ser Glu Phe Leu Thr Met Ser Arg Ile Asn Gly  
100 105 110

Tyr Leu Asn Ile Met Asn Lys Ile Lys Ile Phe Cys Thr Asn Ile Leu  
115 120 125

Lys Asn Met Asp Asn  
130

<210> 54  
<211> 567  
<212> PRT  
<213> Plasmodium falciparum

<400> 54

Met Ile Met Ala Lys Asn Gln Tyr Met Glu Asp Arg Asn Ile Arg Glu  
1 5 10 15

Pro Asn Thr Leu Leu Gly Glu Glu Thr Glu Gln Leu Val Asp Ser Phe  
20 25 30

His Tyr Glu Asn Asn Ser Ser Ser Ile Tyr Lys Lys Val Asn Ser Asn  
35 40 45

Arg Ser Lys Asn Gly Lys His Ser Met Ala Phe His Lys Ser Leu Ala  
50 55 60

Val Val Asn Val Ala Ala Gly Leu Asp Gly Cys Asp Asp Gln Leu Leu  
65 70 75 80

Pro Ala Ser Phe Arg Ala Leu Glu Ala Asp Leu Asn Leu His Pro Ser  
 85 90 95  
 Leu Leu Gly Tyr Ile Thr Leu Ala Gln Thr Leu Met Leu Ser Leu Phe  
 100 105 110  
 Ser Pro Ile Trp Gly Phe Leu Ser Asp Lys Tyr Ser Arg Lys Trp Met  
 115 120 125  
 Leu Val Phe Gly Thr Ala Leu Trp Gly Val Ala Thr Ile Leu Leu Ala  
 130 135 140  
 Asn Ile Asn Asp Phe Ala His Ile Leu Phe Phe Arg Ala Ile Asn Gly  
 145 150 155 160  
 Leu Ala Leu Gly Ser Ile Gly Pro Ile Ser Gln Ser Ile Leu Ala Asp  
 165 170 175  
 Ala Ala Lys Asn Glu Ser Leu Gly Leu Ser Phe Gly Leu Val Gln Leu  
 180 185 190  
 Ser Ser Ser Leu Gly Arg Leu Ile Gly Gly Val Val Thr Thr Thr Val  
 195 200 205  
 Ala Leu Lys Tyr Phe Gly Gly Ile Arg Gly Trp Arg Leu Cys Phe Ile  
 210 215 220  
 Val Val Gly Ile Leu Ser Val Leu Leu Ser Ile Ile Val Ala Leu Phe  
 225 230 235 240  
 Val Glu Asp Ala Pro Arg Gln Val Arg Lys Asn Lys Lys Met Asp Tyr  
 245 250 255  
 Leu Asp Gly Glu Ser Asn Thr Asn Ala Ser Asn Asn Asn Asn Asn Ser  
 260 265 270  
 Asn Asn Asn Asn Ile Asn Asn Asn Ile Asn Met Asn Asn Ser Leu Asp  
 275 280 285  
 Asn Asn Asn Ser Phe Thr Gly Leu Ser His Gln Ser Thr Arg Thr Tyr  
 290 295 300  
 Ile Leu Tyr Gln Asn Ile Val Glu Leu Leu Lys Asp Ser Leu Ser Lys  
 305 310 315 320  
 Lys Ser Ile Ile Ile Ile Leu Leu Glu Gly Phe Thr Gly Thr Ile Pro  
 325 330 335  
 Trp Leu Ala Leu Ser Phe Asn Thr Met Phe Phe Gln Tyr Cys Gly Leu  
 340 345 350  
 Ser Asp Leu Gln Ala Ala Ile Ile Thr Gly Phe Leu Leu Ile Gly Ser  
 355 360 365  
 Ala Ile Gly Gly Val Val Gly Gly His Phe Gly Asp Ile Met His Asp  
 370 375 380  
 Ile Ser Asn Lys His Gly Arg Pro Leu Leu Gly Gln Leu Ala Met Phe  
 385 390 395 400  
 Gly Arg Val Pro Leu Val Leu Leu Ile Tyr Leu Val Ile Pro Lys Arg  
 405 410 415  
 Lys Glu Ser Phe Glu Leu Phe Ala Leu Ser Cys Phe Cys Ile Gly Leu  
 420 425 430  
 Ser Ser Ile Ala Gly Val Ala Val Asn Arg Pro Ile Val Ser Asp Ile  
 435 440 445  
 Ile Arg Pro Asp Tyr Arg Gly Thr Val Phe Ser Leu Thr Ile Ala Ile

450                      455                      460  
 Glu Gly Val Gly Ser Ser Leu Ile Gly Ala Pro Leu Phe Gly Tyr Leu  
 465                      470                      475                      480  
 Ala Glu Lys Ile Phe Lys Tyr Gln Asn Asn Asn Leu Leu Ile Ser Asp  
                     485                      490                      495  
 Met Pro Glu Asp Ile Arg Ile Asn Asn Ala Gln Ala Leu Ser Lys Thr  
                     500                      505                      510  
 Leu Phe Tyr Leu Thr Ile Ile Pro Trp Ile Leu Ser Phe Ile Phe Tyr  
                     515                      520                      525  
 Ser Leu Leu His Phe Thr Tyr Gly Lys Glu Tyr Leu Lys Met Asn Glu  
                     530                      535                      540  
 Ile Ile Gln Asn Glu Tyr Lys Tyr Asp Asp Glu Asp Glu Glu Thr Ile  
 545                      550                      555                      560  
 Pro Glu Lys Lys Met Leu Thr  
                     565

<210> 55  
 <211> 2539  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 55  
 Met Asn Asn Leu Asn Asn Gln Thr Cys Asn Lys Leu Ile Asn Asn Tyr  
   1                      5                      10                      15  
 Tyr Asn Lys Lys Glu Asn Asn Asn Asp Lys Asn Asp His Gly Asn Ser  
                     20                      25                      30  
 His Pro Gln Gly Asn Asn Asn His Gln Asn Lys Gln Asn Asn Ile Leu  
                     35                      40                      45  
 Ile Asn Arg Asn Thr Lys Glu Thr Lys Pro Leu Lys Gly Ile His Thr  
                     50                      55                      60  
 Arg Leu Ser Thr Val Asn Val Gly Tyr Gly Ile Lys Asp Ala Ile Gly  
                     65                      70                      75                      80  
 Gln Ile Phe Lys Tyr Lys His Lys Tyr Asn Glu Tyr Leu Asn Tyr Gly  
                     85                      90                      95  
 Ile Leu Cys Glu Leu Arg Ile Leu Tyr Glu Leu Asn Ile Ile Asp Leu  
                     100                      105                      110  
 Ile Tyr Leu Leu Glu Val Glu Glu Ile Met Arg Arg Tyr Asn Met Lys  
                     115                      120                      125  
 Tyr Glu Ile Asn Glu Thr Tyr Leu Ser Leu His Ile Lys Asp Val Ile  
                     130                      135                      140  
 His Asn Leu Tyr Val Ser Asn Tyr Ile Val Tyr Leu Asn Tyr Leu Val  
 145                      150                      155                      160  
 Leu Phe Asn Pro Val His Ile Ser Lys Ile Lys Lys Asn Ile Leu Ile  
                     165                      170                      175  
 Gln Ile Pro Met Asp Ile Ile Leu Lys Val Leu Cys Pro Asn Val Phe  
                     180                      185                      190  
 Ile Ser Ser Tyr Lys Lys Thr Asn Ile Ile Asn Ile Asn Glu Asn Ser  
                     195                      200                      205  
 Ile Tyr Leu Ile Asp Ser Ser Asp Lys Glu Asn Asp Arg Pro Met Ser

210					215					220					
Ser 225	Lys	Arg	Lys	Arg	Glu 230	Ser	Lys	Tyr	Lys	Lys 235	Val	Glu	Lys	Lys	Lys 240
Asn	Ser	Lys	Glu	Lys 245	Cys	Asp	Lys	Lys	Ile 250	Thr	Asn	Glu	Val	Thr	Ile 255
Thr	Asn	Thr	Glu 260	Leu	Asn	Asn	Glu	Gly 265	Ile	Lys	Glu	Glu	Thr 270	Lys	Glu
Leu	Ile	Asn 275	Glu	Ala	Asn	Asn	Pro 280	Ser	Ile	Lys	Lys	Asp 285	Thr	Thr	Glu
Phe 290	Phe	Leu	Glu	Thr	Asn	Met 295	Lys	Arg	Lys	Asn	Ile 300	Leu	Leu	Pro	His
Thr 305	Gly	Asn	Lys	Ser	Glu 310	Ser	Ile	Arg	Val	Ile 315	Tyr	Ala	Ser	Cys	Leu 320
Ser	Ser	Asn	Lys	Ile 325	Tyr	Leu	Arg	Asn	Ile 330	Asn	Met	Cys	Tyr	Asp 335	Val
Val	Val	Phe	Ile 340	Lys	Ile	Leu	Arg	Asp 345	Leu	His	Phe	Pro	Ile 350	Met	Leu
Lys	Gly	Arg 355	Lys	Ile	Asp	Lys	Tyr 360	Ile	Asp	Asn	Ile	Ile 365	Asn	Ile	Gln
Lys 370	Lys	Val	Tyr	Ser	Glu	Glu 375	Met	Glu	Lys	Ile	Asp 380	Asp	Glu	Lys	Arg
Phe 385	Thr	Ser	Val	Glu	Ser 390	Ile	Asn	Asn	Ser	Phe 395	Asn	Ile	Asn	Asn	Met 400
Glu	Asn	Ile	Phe	Arg 405	Ile	Gln	Asn	Val	Ser 410	Tyr	Leu	Glu	Arg	Val 415	Ala
Ile	Leu	Glu	Cys 420	Lys	Lys	Tyr	Cys	Lys 425	Gly	Glu	Lys	Lys	Tyr 430	Lys	Tyr
Asn	Asn	Phe 435	Asn	Lys	Asn	His	Arg 440	Ile	Lys	Lys	Lys	Lys 445	Cys	Asn	Val
Cys 450	Lys	Cys	Thr	Glu	Gln	Glu 455	Lys	Lys	Asn	Leu	Gly 460	Lys	Ile	Ser	Lys
Glu 465	Tyr	Met	Thr	Ala	Cys 470	Ile	Glu	His	Ser	Ser 475	Leu	Ser	Tyr	Phe	Phe 480
Leu	Lys	Lys	Glu	Lys 485	Asn	Val	Ile	Ile 490	Ile	Glu	Gly	Asn	Val	Asp 495	Lys
Ser	Asp	Thr	Leu 500	Phe	Lys	Asn	Phe 505	Val	Phe	Lys	Lys	Lys	Val 510	Ile	Leu
Asn	Val	Tyr 515	Asn	Cys	Gly	Thr	Val 520	Cys	Arg	Phe	Ile	Leu 525	Pro	Leu	Leu
Cys 530	Leu	Tyr	Ile	Cys	Lys	Gln 535	Asn	Ile	Lys	Ala	Gln 540	Glu	Glu	Asn	Lys
Thr 545	Lys	Ile	Lys	Tyr	Ile 550	Ile	Leu	Lys	Gly	Cys 555	Lys	Gln	Met	Glu	Asn 560
Val	Arg	Ile	Ile	His 565	Pro	Leu	Val	Asn	Val 570	Leu	Arg	Lys	Cys	Phe 575	Lys
Tyr	Ile	Lys	Ile 580	Lys	Tyr	Leu	Lys	Lys 585	Lys	His	Tyr	Leu	Pro 590	Ile	Ser

Ile Ser Ile Lys Lys His Ile Leu Asn Ile Thr His His Asp Ile Phe  
 595 600 605  
 Leu Thr Lys Gln Ile Tyr Val Asp Asn Tyr Tyr Ser Ser Gln Phe Ile  
 610 615 620  
 Ser Ser Leu Leu Leu Ile Ser Pro Phe Ser Lys Asn Asn Thr Lys Leu  
 625 630 635 640  
 Cys Leu Asn Tyr Lys His Ser Tyr Lys Thr Lys Asn Met Ile Asn Asn  
 645 650 655  
 Asp Tyr Thr Asn Lys Tyr Ile Ile Asn Lys Gln Lys Asn Ile Phe Tyr  
 660 665 670  
 Asn Asn Ile Lys Asn Asn Ile Lys Tyr Lys Ile Arg Tyr Leu Tyr Asn  
 675 680 685  
 Ile Ser His Gln Glu Lys Lys Lys Lys Lys Lys Leu Thr Phe Phe Lys  
 690 695 700  
 Lys Tyr Met Leu Lys Lys Glu Cys Leu Leu Lys Asn Ser Ile Leu Asn  
 705 710 715 720  
 Lys Leu Ile Ile Pro His Asp Cys Lys Lys Gly Thr Met Ile Leu Asn  
 725 730 735  
 Gln Asn Ile His Leu Asn Glu Glu Asn Lys Asn Asp Ile Thr Thr Lys  
 740 745 750  
 Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Lys  
 755 760 765  
 Val Asn Asn Gln Ile Cys Val Gln His Lys Leu Pro Cys Asp Tyr Thr  
 770 775 780  
 Phe Tyr Gln Asn Ile Lys Lys Glu Asp Tyr Lys Gln Cys Gly Leu Phe  
 785 790 795 800  
 Asn Thr Thr Ser Lys Ala Phe Ile Asp Met Thr Leu Tyr Val Met Arg  
 805 810 815  
 Thr Trp Gly Ile His Ile Lys Val Asn His Lys Gly Ile Tyr Tyr Val  
 820 825 830  
 Gln Lys Lys Glu Met Tyr Gln Leu Tyr Asp Asp Asn Asn Asn Asn Asn  
 835 840 845  
 Asn Asn Asn Asn Lys Ser Asp Ile Cys Leu Asn Arg Val Asn Pro Asn  
 850 855 860  
 Lys Cys Ser Ser Glu Lys Lys Thr Asn Asn Pro Asn Ser Ser Ser Ile  
 865 870 875 880  
 Leu Lys Lys Asp Lys Glu Lys Lys Lys Asn Gln Met Asp Gly Lys Ile  
 885 890 895  
 Val Thr Asn Leu Val Lys Gly Asp Asn Lys Glu Glu Glu Gly Asn Asn  
 900 905 910  
 Asn Ile Ile Lys Asn Asp Asp Ser Ala Ser Lys Gly Thr Asn Glu His  
 915 920 925  
 Met Met Gln Arg Ile Asn Asp Ala Glu Thr Thr Gln Asn Asn Thr Leu  
 930 935 940  
 His Lys Glu Asn Lys Leu Cys Thr Thr Lys Asp Gln Asn Lys Ile His  
 945 950 955 960



Thr Lys Ile Asn Ser Lys Glu Asn Glu Lys Val Lys Lys Tyr Tyr Tyr  
 965 970 975  
 Tyr His Ile Asn Asn Asp Leu Gly Leu Tyr Phe Tyr Phe Leu Val Gly  
 980 985 990  
 Phe Ile Ile Lys Lys Lys Asn Cys Thr Ile Ser Leu Lys Leu Asn Ile  
 995 1000 1005  
 Asn Asn Leu Asn Val Lys Tyr Lys Gly Asn Asn Ile Tyr Lys Ile Lys  
 1010 1015 1020  
 Thr Val Met Tyr Gln Lys Asp Ile Tyr Asn Tyr Tyr Leu Leu Asn Ile  
 1025 1030 1035 1040  
 Leu Leu Leu Val Gly Val Lys Ile Tyr Ile Arg Gln His Asn Lys Leu  
 1045 1050 1055  
 Asn Lys Glu Ser Glu Tyr Asn Val Asn Ser Gln Asn Leu Ile Gly Ser  
 1060 1065 1070  
 Lys Ser Lys Ser Ser Lys Ile Tyr Met Val His Phe Ile Thr Ser Glu  
 1075 1080 1085  
 Ile Ser Phe Asn Lys Lys Lys Ile Leu Arg Pro Phe Tyr Lys Ile Gln  
 1090 1095 1100  
 Lys Lys Ile Asn Asn Lys Tyr Lys Arg Ile Ile Met Asn Gln Ser Ala  
 1105 1110 1115 1120  
 His Ile Asn Ile Lys Glu Ser Lys Asn Asn Ile Ile Ser Asn Asn Val  
 1125 1130 1135  
 Glu Glu Lys Asn Ser Val Thr Ser Asn Ile Val Ser Asn Ile Ser Ser  
 1140 1145 1150  
 Asn Asn Ile Ser Pro Tyr Tyr Lys Ser Ile Lys Glu Asn Asn Lys Met  
 1155 1160 1165  
 Lys Lys Thr Asn Asn Cys Ile Glu His Ile Leu Asn Asn Tyr Lys Ile  
 1170 1175 1180  
 Lys Tyr Asn Ile Tyr Glu Lys Ile Tyr Ile Lys Tyr Glu Thr Asn Asn  
 1185 1190 1195 1200  
 Asn His Met Leu Ser Phe Lys Ile Val Ile Asp Ala Glu Ser Phe Ser  
 1205 1210 1215  
 Asp Asp Phe Phe Ser Ile Cys Ile Leu Phe Ser His Phe Ile Leu Ser  
 1220 1225 1230  
 Asn Ile Asn Glu Asn Ile Ile Phe Lys Ile Lys Asn Ile His Asn Gln  
 1235 1240 1245  
 Asn Ile Lys Glu Ser Thr Arg Ile Tyr His Val Val Phe Ile Leu Lys  
 1250 1255 1260  
 Leu Phe Phe His Asn Leu Leu Phe Ile Ser Cys Thr Asn Asn Ser Ile  
 1265 1270 1275 1280  
 Tyr Ile Thr Lys Met Leu His Pro Leu Gln Asn Ile Gln Phe Tyr Arg  
 1285 1290 1295  
 Tyr Lys Lys Asn Ile Arg Thr Asn Asn Gln Lys Ile Tyr Asn Thr Asn  
 1300 1305 1310  
 Tyr Ile His Asn Lys Tyr Glu Lys Ile Gln Asn Phe Val Asn Asn Ser  
 1315 1320 1325  
 Lys Tyr Val Ile Asn Asp Met Gln Ser Leu Tyr Leu Tyr Val Asp Thr

1330	1335	1340
Gln Asn Asp His Arg Ile Ile Phe Met Ser Thr Ile Leu Ser Leu Ile 1345	1350	1355 1360
Phe Lys Asn Ile Ile Ile Pro Lys Cys Asp Asn Val His Lys Ser Phe 1365	1370	1375
Pro Leu Phe Phe His Tyr Ala Lys Lys Tyr Leu His Ile Tyr Val Gln 1380	1385	1390
Asn Gly Ser Asn Gln Phe Ile Asn Thr Tyr Asn Phe Gln Asp Val Asn 1395	1400	1405
Asn Ile Asn Leu Leu His Cys Thr Lys Lys Lys Arg Pro Gln Arg Gly 1410	1415	1420
Ser Thr Pro Asp Glu Lys Tyr Lys Gly Gly Glu Ile Lys Gly Asn Asp 1425	1430	1435 1440
Ile Ile Lys Glu Ser Asp Ile Ile Lys Cys Asn Asp Ile Ile Lys Glu 1445	1450	1455
Ser Asp Val Val Asn Lys Asn Glu Ile Val Glu Asn Met Asn Ile Ile 1460	1465	1470
Ile Glu Lys Asp Glu Ile Lys Thr Asp Lys Tyr Thr Glu Pro Ile Lys 1475	1480	1485
Tyr Asp Asn Thr Ser Asp Ala Lys Ser Ile Ser Thr Ser Thr Ser Val 1490	1495	1500
Leu Ser Ser Glu Ser Ser Asn Glu Leu Ser Asp Cys Cys Met Asn Lys 1505	1510	1515 1520
Leu Thr Lys Glu Asn Met Glu Met Asn Asn Val Ile Ile Thr Lys Asn 1525	1530	1535
Asn Asn Asn Asp Asn Asn Asn Glu Asn Asn Glu Asn Asn Glu Asn Asn 1540	1545	1550
Asp Asn Asn Glu Asn Asn Glu Asn Asn Asp Asn Asn Asn Asn Asn 1555	1560	1565
Asn Asn Asn Asn Val Glu Val Tyr Lys Pro Asn Tyr Lys Ile Asn Gly 1570	1575	1580
Leu Gln Asn Ile Ile Asn Ser Cys Leu Asn Phe Ile Cys Ser Lys Arg 1585	1590	1595 1600
Lys Asn Ile Lys Asn Lys Ile Lys Asn Lys Ile Ile Lys His Lys Lys 1605	1610	1615
Asn Lys Ile Ile Asn His Lys Lys Lys Lys Lys Asn Cys Asn Thr Arg 1620	1625	1630
His Arg Gly Asn Thr Gln Ile Asn Asn Lys Leu Val Leu Ile Asn Ile 1635	1640	1645
Thr Pro Tyr Ile Leu Arg Tyr Pro Asn Asn Asn Lys Ser Ser Lys Lys 1650	1655	1660
Leu Ser Cys Thr Lys Glu Ile Lys Lys Lys Thr Phe Pro Arg Ile Cys 1665	1670	1675 1680
Glu Ser Tyr Asp Ile Lys Lys Asn Ile Asp Ile His Asn Val Asn Lys 1685	1690	1695
Lys Asn Tyr Lys Lys Ile Asp Asp Thr Leu Asn Val His Lys Glu Glu 1700	1705	1710

Ile Asp Thr Ser Lys Gln His Thr Asp Glu Lys Ile Cys Lys Lys Ile  
 1715 1720 1725  
 Gln Lys Tyr Leu Tyr Leu Asp Val Lys Arg Lys Arg Tyr Ile Ser Leu  
 1730 1735 1740  
 Tyr Met Tyr Asn Lys Lys Lys Gly Lys Asp Thr Asn Asn Lys Asn Ile  
 1745 1750 1755 1760  
 Gln Lys Lys Lys Lys Lys Glu Glu Glu Lys Lys Gln Ile Ser Tyr Asn  
 1765 1770 1775  
 Ile Ser Ser Lys His Asn Ser Ile Leu Asn Asn Arg Met Lys Tyr Asn  
 1780 1785 1790  
 Asn Ile Ile Asp Met Tyr Lys Arg Asn Asn Phe Ile Tyr Lys Asp Asp  
 1795 1800 1805  
 Asn Tyr Lys Arg Ile Tyr Thr Tyr Asp Glu Ile Leu Glu Asn Asp Ile  
 1810 1815 1820  
 Asn Ile Ser Tyr Leu Ile Lys Gln Ile Asn Ile Leu Asn Val Thr Ile  
 1825 1830 1835 1840  
 Ile Cys Gly Met Arg Asn Val Gly Lys Thr Phe Leu Ser Lys Lys Ile  
 1845 1850 1855  
 Glu Asn Asn Ile Ile Ile Asp Ile Asp Glu Tyr Ile Leu Lys Asp Glu  
 1860 1865 1870  
 Ile Lys Phe Asp Lys Leu Ser Ile Ser Asp Phe Arg Tyr Tyr Glu Tyr  
 1875 1880 1885  
 Val Thr Phe Ile Ser Ser Leu Tyr Leu Ala Phe Tyr Ile Leu Thr Phe  
 1890 1895 1900  
 Asp Arg Asn Leu Ser Ala Pro Lys Asp Gln Thr Gly Ala Thr Ile Lys  
 1905 1910 1915 1920  
 His Val Asp Ile Arg Asp Glu Lys Ile Asn Ser Lys Asn Gln Asn Lys  
 1925 1930 1935  
 Gln Thr Glu Tyr Asp Asn Asp Ile Asn Asp Asn Asn Asn Tyr Asn Asn  
 1940 1945 1950  
 Ser Asp Asn His Asn Leu Leu His Asn Asn Lys Asp Asn Gln His Thr  
 1955 1960 1965  
 Ser Thr Lys Lys Lys Ile Gln Lys Lys Val Ser Phe Ser Asp Val Cys  
 1970 1975 1980  
 Glu Ile Tyr Val Asp Gly Pro Asn Phe Glu Asn Lys Asn Tyr Asp Asp  
 1985 1990 1995 2000  
 Asn Ile Phe Tyr Thr Tyr Thr Asn Lys Gly Ile Thr Phe Tyr Asn Lys  
 2005 2010 2015  
 Lys Ile Asn Asp Leu Phe Cys Lys Leu Arg Lys Lys Cys Ile Gln Glu  
 2020 2025 2030  
 Lys Gln Asn Gly Glu His Gln Met Thr Asn Val Thr Ile Val Leu Gly  
 2035 2040 2045  
 Gly Gly Ile Ile Glu Phe Asp Lys Ser Lys Glu Val Leu Lys Lys Leu  
 2050 2055 2060  
 Lys Asn Thr Ile Leu Ile Lys Arg Asp Ile Asp Glu Ile Tyr Asp Ile  
 2065 2070 2075 2080

Cys Ile Asn Asp Asn Ile Lys Pro Lys Leu Asn Gly Asn Ile Lys Asp  
 2085 2090 2095  
 Ile Ile His Arg Arg Thr Ile Leu Tyr Asp Lys Leu Ser Asn Ala Phe  
 2100 2105 2110  
 His Phe Ile Ile Pro Ser Glu Asn Met Ile Asn Lys Tyr Ile Arg His  
 2115 2120 2125  
 Ser Glu Tyr Asn Lys Tyr Ile Asn Arg Asn Glu Leu Ile Val His Ser  
 2130 2135 2140  
 Phe Leu Arg Phe Phe Asn Tyr Pro Phe Phe Lys Lys Pro Leu Ile Gly  
 2145 2150 2155 2160  
 Asp Ile Ile Thr Asn Tyr Lys Ile Asp Lys Asn Glu Lys Asn Asp Glu  
 2165 2170 2175  
 Lys Asn Asp Glu Lys Asn Asp Glu Lys Asn Asn Glu Lys Asn Asp Glu  
 2180 2185 2190  
 Lys Asn Gly Asp Asn Asn Asp Asp Asn Asn Asp Asn Asn Asn Glu Asp  
 2195 2200 2205  
 Glu Asn Asn Lys Lys Lys Lys Lys Lys Lys Lys Asn Asp Cys Asn His  
 2210 2215 2220  
 Asn His Ile Asn Asn Tyr Tyr Arg Val Leu Tyr Ile Asn Leu Asn Asn  
 2225 2230 2235 2240  
 Leu Arg His Phe Pro Tyr Met Asn Leu Leu Lys Glu Asp Tyr Asp Ile  
 2245 2250 2255  
 Ile His Ile Lys Ile Tyr Lys Tyr Glu Gln Ile Lys Leu Leu Glu Leu  
 2260 2265 2270  
 Ala Ile Phe Leu Ile Arg Ser Cys Thr Cys Lys Glu Tyr Lys Ile Ile  
 2275 2280 2285  
 Val Lys Leu Tyr Pro Gln Tyr Phe Phe Thr Tyr Gln Glu Tyr Ile Ile  
 2290 2295 2300  
 Lys Lys Lys Lys His Lys Lys Lys Ser Leu Lys Asn Lys Lys Lys Ser  
 2305 2310 2315 2320  
 Asn Lys Lys Tyr Glu Phe Asp Asn Tyr Ile Cys Glu Asn Ile Leu His  
 2325 2330 2335  
 Ile Phe Tyr Lys Tyr Lys Ile Asn Ile Phe Glu Leu Asp Asn His Phe  
 2340 2345 2350  
 Leu Lys Val Ala Lys Lys Ile Leu Ser Tyr Lys Lys Glu Asn Ile Phe  
 2355 2360 2365  
 Phe Ile Ile Ser Lys Lys Glu Lys Ile Ile Asn Lys Leu Lys Ile Gln  
 2370 2375 2380  
 Ser Asp Leu Tyr Lys Leu Asn Ile Trp Gln Ala Asp Ile Ile Lys Leu  
 2385 2390 2395 2400  
 Ser Ser Ser Asn Gln Ile Ser Leu Thr Glu Cys Asn Leu Leu Glu Asn  
 2405 2410 2415  
 Ile Leu Tyr Asp Phe Tyr Val Asp Thr Ile Asn Gln Pro Ala Asn Thr  
 2420 2425 2430  
 Leu Leu Phe Glu Lys Arg Leu His Asn Asn Asp Lys Asn Glu Gln Thr  
 2435 2440 2445  
 His Ile Leu Tyr Tyr Asn Ala Thr Asp Lys Cys Leu Phe Ser Phe Leu

```

<400> 56
Met Gln Gln Asp Gly 5 Asn Ile Gln Val Lys 10 Ile Leu Lys Asp Val 15 Asn
1
Pro Tyr Tyr Tyr 20 Lys Lys Glu Asn Pro 25 Tyr Asp Asn Leu Glu 30 Tyr Asn
20
Lys Tyr Val Met Asn Val Asn Asp 40 Val Glu Gly Thr Asn 45 Ile Ile Asp
35
Asp Lys Lys Lys Asp Leu Gly 55 Lys Ser Lys Tyr Asp 60 Ile Phe Thr Thr
50
Asp Ser Leu Ser Thr 70 Thr Asp Glu Val Ser 75 Tyr Ser Tyr Gln Ile
65
Glu Asn Lys Asn Glu 85 Glu Lys Glu Tyr Leu 90 Arg Tyr Tyr Asp Lys Gln
95
Gly Gly Ile Ile 100 Arg Gln Asp Asn 105 Asn Asn Glu Asn 110 Asn Asn
100
Asn Ile Cys Asn Asn Asp His Asn 120 Asn Asn Ile Cys Asn Asn Glu
115
Asn Met Leu Thr Thr Lys 135 Asn Asp Asn Thr Ile 140 Ile Asn Ser Asn
130
Ile Lys Tyr Leu Asn 150 Asn Asn Ile Phe Asn 155 Thr Asn Met Val Pro
145
Gln Lys Asn His Thr 165 Gln Ile Phe Asn 170 Tyr Asp Lys Ser Met Arg
165
Asn Ile Gln Leu Tyr Asn Lys Ala Val 185 Ser Phe Leu Lys Asn Asp Gly
180
Asp Ile Asn Ser Lys Lys Asn 200 Thr His Asp Asn Leu Met 205 Phe Leu Lys
195
Asn Ile Arg Ser Lys Ser Asn 215 Asn Asn Leu Ile Val 220 Asn Arg Lys Ile
210
Thr Asn His Val Thr Asn 230 Asn Val Ile Ser Gly 235 Met Thr Asn Lys Val
225
Ile Gly Gly Met Ala Ser Gly Met Thr Asn Asn Val Thr Ser Ser Ile
240

```

245								250				255			
Thr	Asn	Asn	Met	Thr	Ser	Ser	Met	Thr	Asn	Asn	Met	Ala	Ser	Gly	Met
			260								265				270
Thr	Ser	Ser	Met	Thr	Asn	Asn	Met	Ala	Ser	Gly	Met	Thr	Ser	Ser	Ile
			275				280								285
Thr	Asn	Asn	Met	Thr	Ser	Ser	Met	Thr	Asn	Asn	Met	Ala	Ser	Gly	Met
			290				295				300				
Thr	Ser	Ser	Ile	Thr	Asn	Asn	Met	Thr	Ser	Ser	Met	Thr	Asn	Asn	Met
			305				310				315				320
Ala	Ser	Ser	Met	Thr	Ser	Ser	Met	Thr	Asn	Asn	Met	Thr	Ser	Ser	Met
							325				330				335
Thr	Asn	Asn	Met	Thr	Ser	Ser	Met	Thr	Asn	Asn	Met	Leu	Asn	Asn	Met
			340								345				350
Asn	Arg	Val	Val	Thr	Asn	Asn	Ile	Ile	Thr	Asn	Met	Asn	Arg	Ser	Val
			355				360								365
Ser	Gly	Ser	Lys	Ser	Ile	Asn	Met	Ser	Asn	Leu	Leu	Ile	Ile	Asn	Lys
			370				375				380				
Met	Asp	Tyr	Gly	Asn	Asp	Ile	Tyr	His	Asn	Asn	Asn	Asn	Asn	Asn	Asn
							390				395				400
Asn	Ser	Ser	Ser	Gly	Ser	Asn	Ile	Val	Ser	Gly	Lys	Tyr	Phe	Val	Asn
							405				410				415
Ser	Gln	Asn	Ser	Ser	Lys	Asn	Asn	Phe	Phe	Thr	Lys	Val	Gly	Glu	Ser
							420				425				430
Thr	Ile	Arg	Ser	Pro	Thr	Asn	Ile	Leu	Asp	Ile	Tyr	Lys	Gln	Gly	Asn
			435				440								445
Met	Tyr	Met	His	Ile	Pro	Lys	Asn	Ala	Asp	Leu	Met	Asn	Asn	Val	Ser
			450				455				460				
Ser	Tyr	Ser	Ile	Ala	His	Glu	Asn	Tyr	Ile	Lys	Arg	Asp	Asn	Thr	Asn
							470				475				480
Val	Thr	His	Val	Leu	Asn	Asn	Asn	His	Leu	Val	Asn	Ile	Asn	Asn	Val
							485				490				495
Val	Asn	Asn	Asn	Asn	Leu	Asn	Asn	Asn	Asn	Asn	Leu	Asn	Asn	Asn	Asn
			500				505								510
Asn	Leu	Asn	Ser	Asn	Asn	Asn	Leu	Asn	Ser	Asn	Asn	Asn	Leu	Asn	Asn
			515				520				525				
Asn	Asn	Asn	Leu	Ile	Asn	Asn	Asn	Asn	Leu	Ile	Asn	Asn	Asn	Asn	Tyr
			530				535				540				Val
Arg	Asn	Asn	Gln	Ala	Val	Asn	Asn	Ala	His	Thr	Leu	Asn	Ala	His	Phe
							550				555				560
Asn	Lys	Ser	Asp	Asn	Val	Asp	Asn	Met	Arg	Asn	His	Ile	Pro	Asn	Asn
							565				570				575
Asp	Asn	Lys	Asn	Ile	Val	Asn	Met	Leu	Asn	Leu	Lys	Asn	Met	Lys	Ser
			580				585								590
Ile	Asn	Asp	Leu	Ser	Val	Leu	Ile	Asn	Lys	Asn	Lys	Pro	Ile	His	His
			595				600								605
Val	Ile	Asn	Gly	Thr	Glu	Val	Gln	Gln	Lys	Arg	Ser	Leu	Ser	Asn	Val
			610				615				620				

Gln 625	Lys	Leu	Lys	Thr	Leu 630	Asn	Thr	Phe	Pro	Asn 635	Ala	Lys	Gly	Arg	Phe 640
Ser	Leu	Ile	Asn 645	Lys	Met	Ala	Ser	Met	Pro 650	Asn	Met	Ser	Thr	Thr	Ser 655
Ser	Met	Asn	Met 660	Ser	Gly	Leu	Asn	Thr 665	Ser	Ser	Ser	Glu	Gly 670	Leu	Thr
Asn	Ile	Ile 675	Asn	Met	Asn	Asn	Ile 680	Asn	Ser	Val	Asn	Asn	Ile	Asn	Ser
Val	Asn 690	Asn	Ile	Asn	Ser	Val 695	Asn	Asn	Ile	Asn	Ser 700	Val	Asn	Asn	Leu
Asn 705	Ser	Val	Asn	Asn	Ile 710	Asn	Ser	Val	Asn	Asn 715	Ile	Asn	Ser	Val	Asn 720
Asn	Ile	Asn	Ser	Val 725	Asn	Asn	Ile	Asn	Ser 730	Val	Asn	Asn	Ile	Asn	Ser 735
Val	Asn	Asn	Ile 740	Asn	Ser	Val	Asn	Asn 745	Leu	Asn	Ser	Val	Asn	Asn	Ile 750
Asn	Ser	Val	Asn	Asn	Ile	Asn	Asn 760	Ile	Asn	Tyr	Ile	Asn 765	Asn	Ile	Asn
Tyr 770	Val	Asn	Met	Asn	Lys	Gly 775	Leu	Asn	Pro	Ile	Asn 780	Asn	Val	Ser	Asn
Ile 785	Ser	Ser	Leu	Lys	Leu 790	Leu	Asn	Asn	Asn	Asp 795	Ile	Lys	Lys	Lys	Lys 800
Phe	Asn	Thr	Tyr	Gly 805	Lys	Ser	Glu	Ala	Ser 810	Glu	Asn	Leu	Ser	Lys	Asn 815
Val	Lys	Tyr	Ile 820	Lys	Tyr	Ile	Gln	Glu 825	Asn	Ile	Lys	Tyr	Leu 830	Asn	Asn
Leu	Asp	Asp 835	Asn	Lys	Arg	Lys	Tyr 840	Ser	Leu	Thr	Ser	Ile 845	Asn	Asp	Val
Gly 850	Cys	Ile	Lys	Lys	Lys	Lys 855	Asn	Met	Asn	Asp	Leu 860	Phe	Leu	Gly	Lys
His 865	Asp	Asn	Met	Leu	Arg 870	Thr	Asp	Glu	Ile	Pro 875	Lys	Ile	Asn	Leu	Gly 880
Lys	Asn	Ile	Leu	Asn 885	Asn	Asn	Lys	Ile	Ile 890	Asn	Tyr	Asn	Asp	Asn 895	Asp
Lys	Ser	Asn 900	Ile	Ile	Asn	Asn	Val 905	Ile	Asn	Lys	Asn	Ile	Ser 910	Thr	Asp
Leu	Val 915	Asn	Asp	Arg	Glu	Gly	Asp 920	Met	Asn	Lys	Met	Asn 925	Ile	His	Asn
Arg 930	Glu	Lys	Asp	Glu	Asn	Asn 935	Tyr	Ile	Asn	Ile	Gly 940	Asp	Asn	Lys	Ile
Lys 945	Lys	Asn	Gln	Ile	Asp 950	Val	Val	Asn	Asn	Lys 955	Val	Met	Lys	Leu	Asp 960
Asn	Met	Glu	Asp	Glu 965	Glu	Ala	Met	Asn	Lys 970	Leu	Ser	Leu	Ile	Ser 975	Leu
Tyr	Pro	Asn 980	Asn	Asn	His	Ile	Ile 985	Asn	Asn	Val	Asn	Asn	Val 990	Asn	Asn

Val Asn Asn Val Asn Asn Val Asn Asn Val Asn Asn Val Asn Asn Val  
 995 1000 1005

Asn Asn Val Asn Asn Val Asn Asn Val Asn Tyr Met Asn Asn Met Asn  
 1010 1015 1020

Asn Val Asn Asn Val Asn Asn Met Asn Asn Val Asn Asn Met Asn Asn  
 1025 1030 1035 1040

Val Asn Asn Val Asn Ser Val Asn Asn Ile Lys Gly Ile Asn Asn Met  
 1045 1050 1055

Asn Asn Asn Asn Asn Ile Asn Met Asn Arg Ser Tyr Lys Met Asn  
 1060 1065 1070

Met Lys Lys Val Ser Lys Lys Asp Asn Gly Gln Asn Val Val Ser Glu  
 1075 1080 1085

Lys Arg Phe Ser Glu Glu Lys Tyr Asn Phe Leu Lys Asn Leu Ile Arg  
 1090 1095 1100

Asn Asn Lys Asn Met Val Lys Leu Lys Tyr Leu Asn Lys Phe Leu Gly  
 1105 1110 1115 1120

Lys Arg Ser Gly Pro Ser Ile Lys Asn Asn Met Asn Asp Met Met Val  
 1125 1130 1135

Lys Met Asn Asn Asn Met Lys Asp Ile Met His Ile Lys Asp Ala Thr  
 1140 1145 1150

Asn Ile Asn Lys Ile Asn Asn Lys Leu Val Asn Leu Asn Thr Asn Asn  
 1155 1160 1165

Cys Ile Ser Tyr Asn Ser Cys Asn Lys Met Asn Tyr Ile His Lys Cys  
 1170 1175 1180

Lys Lys Lys Arg Val Leu Cys Leu Asp Thr Lys His Gly Lys Asn Glu  
 1185 1190 1195 1200

Ile Lys Gln Asn Glu Lys Leu Ile Tyr Thr Asn Tyr Glu Ile Lys Met  
 1205 1210 1215

Phe Leu Leu Asn Thr Ile Lys Ala Ile Gly Ile Val Phe Lys Lys Trp  
 1220 1225 1230

Lys Phe Lys Asn Phe Gly Leu Tyr Phe Trp Tyr His Ile Lys Cys Ile  
 1235 1240 1245

Glu Asn Glu Arg Asp Leu Asn Phe Tyr Ile Lys Ile Phe Asn Phe Leu  
 1250 1255 1260

Phe Glu Ile Ile Thr Gly Lys Asn Ile Tyr Tyr Gln Ile Asn Asp Ile  
 1265 1270 1275 1280

His Asn Ile Val Ala Leu Phe Lys Glu Phe Lys Ile Tyr Asp Cys Lys  
 1285 1290 1295

His Val Leu Lys Lys Ser Ile Lys Val Leu Asn Lys Tyr Ala Lys Lys  
 1300 1305 1310

Asn Ser Lys Glu Phe Ser Leu Phe Glu Asn Asn Gln His Val Val Leu  
 1315 1320 1325

Asp Ile Asn Lys His Met Leu Phe Asn Asp Asp Glu Lys Lys Leu Thr  
 1330 1335 1340

Thr Cys Asn Ile Lys Gln Asn Glu Gln Glu Gln Ile Lys Thr Lys Val  
 1345 1350 1355 1360

Leu Tyr Asp His Asp Asn Ile Asn Val Asp Thr Lys Gln Asn Tyr Gln



1365

1370

1375

Lys Ile Ile Thr Asn Lys Asn Asn His Pro Lys Asp Asn Phe Tyr Ser  
 1380 1385 1390

Tyr Leu Tyr Asp Ser Leu Gln Gly Lys Asn His Ile Phe Gln Gln Pro  
 1395 1400 1405

Gly Val Gln Asn Met His Ile Tyr Asn Met Phe Ala Gln Phe Asn Glu  
 1410 1415 1420

Leu Asn Phe Asn Asp Met Phe Asn Phe Ser Ile Thr  
 1425 1430 1435

<210> 57  
 <211> 106  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 57  
 Met Ala Phe Phe Cys Pro Asn Cys His Asn Ile Val Leu Val His Ile  
 1 5 10 15

Glu Lys Gly Val Tyr Phe Tyr Cys Lys Ser Cys Asn Tyr Lys Tyr Lys  
 20 25 30

Ile Lys Asn Lys Ile Tyr Asn Lys Phe Asp Cys Gln Gln Phe Asn Lys  
 35 40 45

Thr Ile Pro Leu Asp Ala Val Asp Ile Asn Asn Lys Asn Met Ser Lys  
 50 55 60

Thr Gln Ala Val Cys Pro Lys Cys Thr Asn Asp Glu Ala Tyr Phe Tyr  
 65 70 75 80

Thr Leu Gln Ile Arg Ser Ala Asp Glu Pro Ser Thr Ile Phe Tyr Ile  
 85 90 95

Cys Val Lys Cys Asn Tyr His Trp Lys Glu  
 100 105

<210> 58  
 <211> 471  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 58  
 Met Asp Val His Val Asn Gln Leu Lys Asn Ile Ser Pro Ile Asp Gly  
 1 5 10 15

Arg Tyr Lys Arg Ser Cys Gln Glu Val Ser Glu Tyr Phe Ser Glu Tyr  
 20 25 30

Ala Leu Ile Lys Tyr Arg Ile Ile Val Glu Ile Lys Trp Leu Leu Phe  
 35 40 45

Leu Asn Asp Lys Glu Tyr Phe Phe Pro Lys Val Ser Glu Lys Ser Leu  
 50 55 60

Ser Asn Ile Thr Ser Ile Met Glu Leu Ile Asn Asp Asn Asp Ile Leu  
 65 70 75 80

Arg Val Lys Lys Ile Glu Glu Glu Thr Asn His Asp Val Lys Ala Val  
 85 90 95

Glu Tyr Phe Ile Arg Glu Lys Leu Glu Ser Leu Lys Asn Glu Glu Ile  
 100 105 110

Thr Lys Val Ile Pro Tyr Val His Tyr Leu Cys Thr Ser Glu Asp Ile  
 115 120 125  
 Asn Asn Ile Ala Tyr Gly Leu Cys Leu Tyr Asn Cys Ile His Asn Ile  
 130 135 140  
 Ile Ile Pro Asn Ile Gln Asn Ile Ile Asp Lys Leu Lys Glu Phe Ser  
 145 150 155 160  
 Phe Asn Tyr Ser Asp Val Ser Leu Leu Ser Lys Thr His Gly Gln Pro  
 165 170 175  
 Ala Ser Pro Thr Thr Phe Gly Lys Glu Met Ser Asn Tyr Tyr Tyr Arg  
 180 185 190  
 Leu Tyr Lys His Ile Asn Lys Leu Lys Asn Ile Glu Ile Tyr Val Lys  
 195 200 205  
 Phe Asn Gly Ala Val Gly Asn Phe Asn Ala His Lys Val Cys Asp Pro  
 210 215 220  
 Asn Ile Asp Trp Ile Asp Asn Ile Lys Tyr Phe Ile Glu Thr Tyr Phe  
 225 230 235 240  
 Asn Leu His Phe Ser Leu Tyr Cys Thr Gln Ile Gln Asp His Asp Tyr  
 245 250 255  
 Ile Cys Glu Ile Ser Asp Thr Leu Ala Arg Leu Asn Tyr Thr Leu Ile  
 260 265 270  
 Asp Leu Ser Val Asp Met Trp Leu Tyr Ile Ser Ser Asn Val Leu Lys  
 275 280 285  
 Leu Lys Val Ile Gln Lys Glu Ile Gly Ser Ser Thr Met Pro His Lys  
 290 295 300  
 Val Asn Pro Ile Asp Phe Glu Asn Ala Glu Gly Asn Leu His Leu Ala  
 305 310 315 320  
 Asn Ser Leu Phe Lys Leu Phe Ser Ser Lys Leu Pro Ile Ser Arg Leu  
 325 330 335  
 Gln Arg Asp Leu Ser Asp Ser Thr Val Leu Arg Asn Leu Gly Ser Ser  
 340 345 350  
 Phe Ala Tyr Ser Leu Ile Ser Tyr Lys Ser Leu Leu Arg Gly Leu Asn  
 355 360 365  
 Lys Ile Asp Val Asp Gln Asn Val Met Asn Glu Gln Leu Asn Gln Asn  
 370 375 380  
 Trp Cys Thr Leu Ala Glu Pro Ile Gln Ile Ile Met Lys Lys Tyr Asn  
 385 390 395 400  
 Ile Ala Asp Ser Tyr Glu Gln Leu Lys Asn Phe Thr Arg Gly Lys Ser  
 405 410 415  
 Ile Asp Lys Gln Cys Met Tyr Gln Phe Ile Gln Gln Asn Cys Ser His  
 420 425 430  
 Leu Pro Lys Asn Ala Ile Asp Glu Leu Met Asn Leu Thr Pro His Asn  
 435 440 445  
 Tyr Leu Gly Tyr Ala Ser Tyr Leu Ser Lys Asn Val Glu His Phe Ser  
 450 455 460  
 Gln Glu Tyr Ile Lys Lys Asn  
 465 470

<210> 59  
 <211> 272  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 59  
 Met Lys Val Ile Lys Thr Leu Ser Ile Ile Asn Phe Phe Ile Phe Val  
           1                          5                          10                          15  
 Thr Phe Asn Ile Lys Asn Glu Ser Lys Tyr Ser Asn Thr Phe Ile Asn  
                           20                          25                          30  
 Asn Ala Tyr Asn Met Ser Ile Arg Arg Ser Met Ala Glu Ser Lys Pro  
                           35                          40                          45  
 Ser Thr Gly Ala Gly Gly Ser Ala Gly Gly Ser Ala Gly Gly Ser Ala  
           50                          55                          60  
 Gly Gly Ser Ala Gly Gly Ser Ala Gly Gly Ser Ala Gly Ser Gly Asp  
           65                          70                          75                          80  
 Gly Asn Gly Ala Asp Ala Glu Gly Ser Ser Ser Thr Pro Ala Thr Thr  
                           85                          90                          95  
 Thr Thr Thr Lys Thr Thr Thr Thr Thr Thr Thr Thr Asn Asp Ala Glu  
                           100                          105                          110  
 Ala Ser Thr Ser Thr Ser Ser Glu Asn Pro Asn His Lys Asn Ala Glu  
                           115                          120                          125  
 Thr Asn Pro Lys Gly Lys Gly Glu Val Gln Glu Pro Asn Gln Ala Asn  
           130                          135                          140  
 Lys Glu Thr Gln Asn Asn Ser Asn Val Gln Gln Asp Ser Gln Thr Lys  
           145                          150                          155                          160  
 Ser Asn Val Pro Pro Thr Gln Asp Ala Asp Thr Lys Ser Pro Thr Ala  
                           165                          170                          175  
 Gln Pro Glu Gln Ala Glu Asn Ser Ala Pro Thr Ala Glu Gln Thr Glu  
                           180                          185                          190  
 Ser Pro Glu Leu Gln Ser Ala Pro Glu Asn Lys Gly Thr Gly Gln His  
           195                          200                          205  
 Gly His Met His Gly Ser Arg Asn Asn His Pro Gln Asn Thr Ser Asp  
           210                          215                          220  
 Ser Gln Lys Glu Cys Thr Asp Gly Asn Lys Glu Asn Cys Gly Ala Ala  
           225                          230                          235                          240  
 Thr Ser Leu Leu Asn Asn Ser Ser Asn Ile Ala Ser Ile Asn Lys Phe  
                           245                          250                          255  
 Val Val Leu Ile Ser Ala Thr Leu Val Leu Ser Phe Ala Ile Phe Ile  
                           260                          265                          270

<210> 60  
 <211> 272  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 60  
 Met Asn Ile Leu Cys Ile Leu Ser Tyr Ile Tyr Phe Phe Val Ile Phe  
           1                          5                          10                          15

Tyr Ser Leu Asn Leu Asn Asn Lys Asn Glu Asn Phe Leu Val Val Arg  
 20 25 30  
 Arg Leu Met Asn Asp Glu Lys Gly Glu Gly Gly Phe Thr Ser Lys Asn  
 35 40 45  
 Lys Glu Asn Gly Asn Asn Asn Arg Asn Asn Glu Asn Glu Leu Lys Glu  
 50 55 60  
 Glu Gly Ser Leu Pro Thr Lys Met Asn Glu Lys Asn Ser Asn Ser Ser  
 65 70 75 80  
 Asp Lys Gln Pro Asn Asp Ile Ser His Asp Glu Ser Lys Ser Asn Ser  
 85 90 95  
 Asn Asn Ser Gln Asn Ile Gln Lys Glu Pro Glu Glu Lys Glu Asn Ser  
 100 105 110  
 Asn Pro Asn Leu Asp Ser Ser Glu Asn Ser Ser Glu Ser Ala Thr Arg  
 115 120 125  
 Ser Val Asp Ile Ser Glu His Asn Ser Asn Asn Pro Glu Thr Lys Glu  
 130 135 140  
 Glu Asn Gly Glu Glu Pro Leu Asp Leu Glu Ile Asn Glu Asn Ala Glu  
 145 150 155 160  
 Ile Gly Gln Glu Pro Pro Asn Arg Leu His Phe Asp Asn Val Asp Asp  
 165 170 175  
 Glu Val Pro His Tyr Ser Ala Leu Arg Tyr Asn Lys Val Glu Lys Asn  
 180 185 190  
 Val Thr Asp Glu Met Leu Leu Tyr Asn Met Met Ser Asp Gln Asn Arg  
 195 200 205  
 Lys Ser Cys Ala Ile Asn Asn Gly Gly Cys Ser Asp Asp Gln Ile Cys  
 210 215 220  
 Ile Asn Ile Asn Asn Ile Gly Val Lys Cys Ile Cys Lys Asp Gly Tyr  
 225 230 235 240  
 Leu Leu Gly Thr Lys Cys Ile Ile Leu Asn Ser Tyr Ser Cys His Pro  
 245 250 255  
 Phe Phe Ser Ile Leu Ile Tyr Ile Thr Leu Phe Leu Leu Leu Phe Val  
 260 265 270

<210> 61  
 <211> 272  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 61  
 Met Trp Ile Val Lys Phe Leu Ile Val Val His Phe Phe Ile Ile Cys  
 1 5 10 15  
 Thr Ile Asn Phe Asp Lys Leu Tyr Ile Ser Tyr Ser Tyr Asn Ile Val  
 20 25 30  
 Pro Glu Asn Gly Arg Met Leu Asn Met Arg Ile Leu Gly Glu Glu Lys  
 35 40 45  
 Pro Asn Val Asp Gly Val Ser Thr Ser Asn Thr Pro Gly Gly Asn Glu  
 50 55 60

Ser Ser Ser Ala Ser Pro Asn Leu Ser Asp Ala Ala Glu Lys Lys Asp  
 65 70 75 80  
 Glu Lys Glu Ala Ser Glu Gln Gly Glu Glu Ser His Lys Lys Glu Asn  
 85 90 95  
 Ser Gln Glu Ser Ala Asn Gly Lys Asp Asp Val Lys Glu Glu Lys Lys  
 100 105 110  
 Thr Asn Glu Lys Lys Asp Asp Gly Lys Thr Asp Lys Val Gln Glu Lys  
 115 120 125  
 Val Leu Glu Lys Ser Pro Lys Glu Ser Gln Met Val Asp Asp Lys Lys  
 130 135 140  
 Lys Thr Glu Ala Ile Pro Lys Lys Val Val Gln Pro Ser Ser Ser Asn  
 145 150 155 160  
 Ser Gly Gly His Val Gly Glu Glu Glu Asp His Asn Glu Gly Glu Gly  
 165 170 175  
 Glu His Glu Glu Glu Glu His Glu Glu Asp Asp Asp Asp Glu Asp  
 180 185 190  
 Asp Asp Thr Tyr Asn Lys Asp Asp Leu Glu Asp Glu Asp Leu Cys Lys  
 195 200 205  
 His Asn Asn Gly Gly Cys Gly Asp Asp Lys Leu Cys Glu Tyr Val Gly  
 210 215 220  
 Asn Arg Arg Val Lys Cys Lys Cys Lys Glu Gly Tyr Lys Leu Glu Gly  
 225 230 235 240  
 Ile Glu Cys Val Glu Leu Leu Ser Leu Ala Ser Ser Ser Leu Asn Leu  
 245 250 255  
 Ile Phe Asn Ser Phe Ile Thr Ile Phe Val Val Ile Leu Leu Ile Asn  
 260 265 270

<210> 62  
 <211> 1712  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 62  
 Met Asp Ser Asp Lys Tyr Lys Lys Phe Tyr Val Tyr Asn His Gly Phe  
 1 5 10 15  
 Thr Lys Gln Pro Phe Tyr Glu Arg Asn Leu Asn Asp Lys Gly Ile His  
 20 25 30  
 Leu Lys Glu Leu Lys Arg Leu Glu Arg Val Asp Glu Pro Arg Leu Tyr  
 35 40 45  
 Asn Asn Val Asp Lys Ile Pro Asn Lys Lys Glu Ile Ile Tyr Asn Asn  
 50 55 60  
 Ile Lys Ser Asn Asn Ile Gln Val Arg Val Asn Gln Asn Asn Asn Glu  
 65 70 75 80  
 Glu Lys Lys Lys Glu Glu Ala Asn Tyr Thr Cys Val Asn Asn Lys Tyr  
 85 90 95  
 Val Thr Leu Lys Asn Lys Val His Val Asn Lys Tyr Val Asn Asn Ser  
 100 105 110

Asn Ile Asn Lys Ile Lys Ile Val Pro Ile Ile Lys Cys Ser Asn Tyr  
 115 120 125  
 Lys Ile Lys Asn Asn Pro Ile Ser His Leu Lys Ser Asn Tyr Glu Asn  
 130 135 140  
 Lys Phe Val Lys Leu Ser Asn Phe Ser Asn Ile Lys Asn Gly Cys Ser  
 145 150 155 160  
 His Lys Asp Asn Val Ile Asn Glu Thr Met Asp Gln His Lys Ser Glu  
 165 170 175  
 Gln Leu Asn Asn Asp Asn Ile Lys Lys Leu Leu Tyr Asp Tyr Cys Ile  
 180 185 190  
 Phe Arg Glu Asp Thr Ile Lys Thr Lys Thr Asn Ile Ser Tyr Asn Lys  
 195 200 205  
 Met Asn Ser Phe Lys Asp Asn Glu Glu Asn Ile Asn Tyr Met Asp Asn  
 210 215 220  
 Asn Asn Ile Lys Ser Asn Ser Ser Ser Tyr Cys Ser Tyr Ser Asn Lys  
 225 230 235 240  
 Ile Asn Gln Asn Asn Val Asn His Thr His Leu Lys Thr Glu Phe Leu  
 245 250 255  
 Asn Glu Lys Asn Ser His Thr Gln Asn Glu Gln Ser Ile Pro Leu Leu  
 260 265 270  
 Asp Gly Leu Gln Asn Asn His Asn Ser Ala Thr Lys Phe His Asn Asn  
 275 280 285  
 Ile Tyr Asp Asn Asn Asn Ser Leu Val Asn Tyr Lys Ser Asp Lys Gly  
 290 295 300  
 Ile Asp Leu His Asn Lys Met Met Lys Ile Glu Thr Asp Lys Asn Gly  
 305 310 315 320  
 Ile Ile Thr Leu Glu Lys Lys Lys His Asp Glu Lys Tyr Tyr Asn Asn  
 325 330 335  
 Ile Phe Leu Asn Pro Leu Asn Asp Asn Ser Asn Asn Val Val Ile Thr  
 340 345 350  
 Thr Cys Asp Asn Lys Glu Ser Tyr Arg Asn Ser Thr Ser Asp Met Ile  
 355 360 365  
 Asn Lys Ile Phe Glu Lys Met Met Asn Glu Lys Lys Asn Ile Leu Lys  
 370 375 380  
 Met Lys Asn Phe Asn Asp Val Ile Lys Lys Lys Ile Thr Met Ala Lys  
 385 390 395 400  
 Glu Lys Ile Leu Asn Ser Asn Ser Thr Ile Asn Met Lys Lys Val Ser  
 405 410 415  
 Phe Tyr Asn Ser Lys Asp Glu Asp Leu Phe Asn Glu Lys Glu Asn Ser  
 420 425 430  
 Tyr Lys Tyr Gly Val Lys Arg Glu Asn Gln Glu Asp Ile Asn Val Ile  
 435 440 445  
 Lys Asn Asn Met Lys Arg Asn Asn Ile Asn Ile Asp Asn Asn Asp Asn  
 450 455 460  
 Ile Asn Ile Ile Lys Asn Asp Ser Val Ser Lys Asn Ile His Ile Asn  
 465 470 475 480  
 Asn Lys Lys Lys Arg Asp Asp Asp Phe Pro Phe Asn Asn Ser Ala Gly  
 485 490 495 500

485										490					495				
Leu	Leu	Leu	Asp	Phe	Asp	Leu	Cys	Lys	Arg	Lys	Val	Leu	Glu	Ile	Leu				
			500					505					510						
Lys	Asn	Val	Gln	Ser	Ser	Lys	Lys	Lys	Asn	Lys	Ile	Leu	Thr	Asn	His				
		515					520					525							
Asn	His	Ser	Ser	Asp	Asn	Gln	Asn	Cys	His	Ser	Ser	Asp	Asn	Gln	Asn				
	530					535					540								
Cys	His	Ser	Ser	Asp	Asn	Gln	Asn	Cys	His	Ser	Ser	Asp	Asn	Gln	Asn				
545					550					555					560				
Cys	His	Ser	Ser	Asp	Asn	Gln	Asn	Cys	Asp	Ser	Asn	Ala	Cys	Asn	Lys				
				565					570					575					
Lys	Asp	Glu	Glu	Lys	Lys	Arg	Lys	Lys	Lys	Lys	Ile	Lys	Lys	Lys	Asn				
			580					585					590						
Lys	Met	Lys	Asn	Lys	Ser	Asn	Asn	Lys	Ser	Lys	Asn	Lys	Arg	Glu	Thr				
		595					600					605							
Lys	Ser	Lys	Lys	Ile	Ser	Asn	Asn	Asn	Asn	Asn	Asp	Asn	Met	Asn	Asn				
	610					615					620								
Gln	Cys	Asp	Asn	Met	Gly	Asp	Gln	Arg	Ile	Asn	Asn	Glu	Asn	Met	Asp				
625					630					635					640				
Lys	Gln	Asn	Val	Asn	Ile	Gln	Asn	Glu	Gly	Asn	Gly	Phe	Asn	Asn	Asn				
				645					650					655					
Lys	Asn	Asn	Asn	Asp	Leu	Leu	Asn	Val	Tyr	Ile	Ser	Pro	Asn	Met	Ile				
			660					665					670						
Asn	His	Ser	Leu	Ser	Ser	Thr	Cys	Glu	Lys	Lys	Asn	Lys	Glu	Asp	Asn				
		675					680					685							
Lys	Met	Asn	Asp	Asn	Lys	Phe	Leu	Asn	Ser	Ser	Ser	Lys	Met	Lys	Ile				
	690					695					700								
Pro	Glu	Ile	Ser	Thr	Asn	Asn	Ser	Asn	Glu	Lys	Ile	Val	Asn	Val	Ser				
705					710					715					720				
Asn	Asp	Glu	Met	Leu	Val	Tyr	His	Asn	Leu	Thr	Val	Leu	Asn	Val	Lys				
				725					730					735					
Glu	Gln	Gly	Gly	Val	Thr	Glu	Glu	Ser	Ser	Cys	Ile	Lys	Arg	Thr	Tyr				
			740					745					750						
Phe	Val	Asp	Gln	Phe	Tyr	Asp	Ser	Tyr	Asn	Met	Arg	Asn	Glu	Lys	Ile				
		755					760					765							
Thr	Asp	Asp	Asn	Met	Gln	Val	Glu	Asp	Ile	Tyr	Asn	Val	Lys	Glu	Asn				
	770					775					780								
Ile	Lys	Arg	Thr	Leu	Lys	Gly	Asp	Gly	His	Asp	Asp	Val	Lys	Thr	Asn				
785					790					795					800				
Met	Leu	Ser	Glu	Asp	Asn	Ser	Tyr	Ala	Ser	Gly	Leu	Trp	Gly	Asn	Glu				
				805					810					815					
Ile	Asn	Phe	Ile	Ser	Asn	Asn	Glu	Asn	Cys	Leu	Asn	Ser	Tyr	Asp	Ile				
			820					825					830						
Ser	Cys	Asp	Glu	Lys	Tyr	Ile	Pro	Asn	Glu	Glu	Glu	Gln	Asp	Glu	Glu				
		835					840					845							
Leu	Cys	Ser	Asn	Asn	Ile	Leu	Val	Lys	Asp	Ile	Glu	Glu	Lys	Lys	Met				
	850					855					860								

Cys Gly Lys Leu Phe Phe Glu Glu Ile Cys Val Phe Arg Ile Asn Glu  
 865 870 875 880  
 Lys Asn Glu His Gly His Glu Asn Leu Arg Lys Asn Asn His Asn Asp  
 885 890 895  
 Asp Thr His Lys Met Tyr Ser Ser Tyr Glu Asn Ile Gln Asn Ile Asn  
 900 905 910  
 Lys Gln Ser Thr Asn Pro Phe Cys Lys Lys Asp Glu Met Glu Lys Ser  
 915 920 925  
 Gln Gly Thr Asn Leu Phe Tyr Asp Asn Tyr Ile Asn Ser Val Asp Ile  
 930 935 940  
 Thr Lys Leu Glu Leu Asn Lys Asn Cys Tyr Gln His Ile Asn Tyr Glu  
 945 950 955 960  
 Val Gln Asn Leu Ile Lys Lys Glu Asn Ser Tyr Ala Ala Glu Met Asn  
 965 970 975  
 Val Gly Leu Val Phe Arg Lys Tyr Ile Pro Ile Leu Ile Asn Leu Ser  
 980 985 990  
 Cys Asn Tyr Leu Leu Ile Lys Lys Asn Glu Lys Asn Val Ile Thr Cys  
 995 1000 1005  
 Ile Ser Tyr Thr Asn Ile Ile Asp Val Lys Ile Val Lys Lys Ser Lys  
 1010 1015 1020  
 Lys Asn Lys Glu Arg Phe Leu Phe Lys Ile Val Tyr Val Phe Lys Lys  
 1025 1030 1035 1040  
 Lys Glu Gln Lys Thr Glu Lys Asn Val Thr Leu Leu Phe Arg Ala Asn  
 1045 1050 1055  
 Leu Met Glu Ile Phe Glu Lys Ile Lys Gly Arg Val Asp Tyr Cys Ile  
 1060 1065 1070  
 Ile Pro Asn Glu Asp Asp Lys Asn Ile Gln Leu Gln Asp Lys Lys Lys  
 1075 1080 1085  
 Lys Lys Gly Lys Lys Lys Lys Glu Leu Gln Glu Glu Lys Met Lys Lys  
 1090 1095 1100  
 Lys Lys Lys Thr Gln Glu Tyr Val Asp Ile Glu Thr Val Tyr Glu Tyr  
 1105 1110 1115 1120  
 Val Ile Glu Lys Tyr Lys Arg Val His Val Leu Tyr Leu Gly Arg Leu  
 1125 1130 1135  
 Leu Gln Ile Val Glu Lys Leu Phe Lys Lys Tyr Ile Leu Lys Tyr Ser  
 1140 1145 1150  
 Phe His Lys Leu Arg Ile Phe Tyr Glu Tyr Lys Ile Glu Met Glu Lys  
 1155 1160 1165  
 Leu Lys Lys Asn Tyr Ile His Cys Ile Tyr Asp Ile Ser Asp Lys Leu  
 1170 1175 1180  
 Glu Phe Leu Ile Lys Lys Lys Met Gln His Tyr Phe Asn His Ile Ile  
 1185 1190 1195 1200  
 Ile Asn Ser Tyr Glu Ser Ser Phe Ile Asn Tyr Gln Ile Lys Thr Asn  
 1205 1210 1215  
 Asp Met Leu Tyr Asn Leu Leu Leu Lys Glu Lys Ser Ala Tyr Gln Asn  
 1220 1225 1230



His Leu Gly Lys Asn Tyr Ile Leu Ile Leu Tyr Lys Val Leu Leu Ser  
1235 1240 1245

Met Tyr Lys Lys Lys Met Ala Ile Tyr Phe Arg Ser Phe Val Tyr Asn  
1250 1255 1260

Asn Ile Lys Val Ser Lys Lys Lys Asn Ala Phe Ala Tyr Thr Leu Thr  
1265 1270 1275 1280

Arg Val Asn Ser Ile Leu Val Leu Tyr Glu Arg Arg Ile Lys Ser Phe  
1285 1290 1295

Ile Phe Ser Lys Leu Lys Phe Asn Tyr Asp Asn Val Ser Tyr Phe Cys  
1300 1305 1310

Phe Thr Met Tyr Lys Ile Tyr Leu Arg Arg Ile Leu Phe Gly Tyr Leu  
1315 1320 1325

Arg Ile Arg Asp Asn Arg Ile Asn Ile Lys Asn Val Ile Glu Lys Asn  
1330 1335 1340

Val Tyr Arg Leu Val Lys Leu Ile Ser Lys Ile Ser Asp Asn His Lys  
1345 1350 1355 1360

Tyr Asn Ala Phe Leu Lys Leu Gln Lys Tyr Val Tyr Glu Gln Asn Glu  
1365 1370 1375

Lys Lys Asn Lys Met Ile Cys Asp Asn Leu Ile Tyr Ala Asn Asn Glu  
1380 1385 1390

Leu Cys Asn Asn Leu Asp Lys Ile Ala Ile Glu Lys Gly Ile Asn Gln  
1395 1400 1405

Ile Asp Cys Leu Ile Lys Phe Lys Arg Lys Glu Cys Leu Met Lys Tyr  
1410 1415 1420

Phe Tyr Thr Leu Lys Gly Pro Gln Ile Asn Thr Glu Arg Phe Tyr Tyr  
1425 1430 1435 1440

Cys Ile Arg Tyr Cys Ser Ile Phe Ser Phe Val Leu Asn Lys Ile Ile  
1445 1450 1455

Gln Lys Lys Val Gln His Ile Phe Phe Gln Phe Val Leu Lys Thr Leu  
1460 1465 1470

Gln Arg Asn Asn Lys Asn Arg Leu Thr His Ala Ile Lys Leu Leu Gln  
1475 1480 1485

Val Leu Val Gln Lys Lys Glu Lys Lys Ser Val Ile Asp Val Leu Gln  
1490 1495 1500

Leu Tyr Asp Lys Tyr Pro Tyr Ile Phe Gln Tyr Lys Asp Leu Thr Lys  
1505 1510 1515 1520

Ile Glu Val Phe Val Ile Cys Val Gln Asn Phe Val Thr Leu Tyr Asn  
1525 1530 1535

Arg Lys Leu Leu Leu Asn Phe Leu Leu Lys Leu His Tyr Leu Lys Tyr  
1540 1545 1550

Gln Glu Gln Phe Met Lys Thr Tyr Asn Gly Ile Gly Ser Ile Tyr Lys  
1555 1560 1565

Phe Val His Val Leu Asp Lys Lys Leu Met Asn Thr Ile Arg Glu Ser  
1570 1575 1580

Phe Arg Val Ile Leu Gln Asn Asp Lys Phe Leu Arg Glu Lys Met Asn  
1585 1590 1595 1600

Met Lys Met Glu Gln Met Asp Met Lys Met Glu Lys Ile Asp Val Asn

	1605	1610	1615
Met Asp Gln Met Asp Val Lys Met Glu Gln Met Asp Val Lys Met Glu			
1620	1625	1630	
Gln Met Asp Val Lys Met Lys Arg Met Asn Lys Lys Lys Ser Lys Gln			
1635	1640	1645	
Ile His Val Asn Tyr Asn Asn Lys Ala Tyr Ser Ser Ser Ser Pro Ser			
1650	1655	1660	
Pro Met Leu Arg Tyr Asn Lys Tyr Lys Asp Met Ser Ser Asn Ser Ala			
1665	1670	1675	1680
Ser Leu Ile Lys Lys Tyr Pro Phe Leu Ile Tyr Asn Ser Glu Ile Ser			
1685	1690	1695	
Pro Asp Cys Thr Thr Met Ala Gly Lys Phe Tyr Asn Gln Lys Asn Lys			
1700	1705	1710	

<210> 63  
 <211> 160  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 63  
 Met Leu Lys Phe Leu Ser Thr Lys Cys Lys Gln Phe Asn Ser Leu Asn  
 1 5 10 15  
 His Ile Ile Lys His Lys Ile Tyr Phe Pro Ser Lys Ser Asn Lys Ser  
 20 25 30  
 Tyr Phe Ser Ser Ser Val Lys Asp Val Glu Lys Lys Asn Lys Glu Pro  
 35 40 45  
 Ile Ile Gln Leu Thr Asn Asp Ala Ile Asn Lys Met Lys Glu Ile Asn  
 50 55 60  
 Leu Lys Tyr Lys Asn Ser Lys Ala Leu Lys Val Cys Val Glu Ala Gly  
 65 70 75 80  
 Gly Cys Ser Gly Phe Gln Tyr Ser Phe Ser Leu Ile Asp Lys Asn Lys  
 85 90 95  
 Ile Lys Asp Lys Glu Gln Ile Val Tyr Asp Lys Asp Cys Ile Val Val  
 100 105 110  
 Ile Asp Lys Gln Val Ile Asp Ile Leu Lys Asn Ser Lys Ile His Tyr  
 115 120 125  
 Ile Asn Asn Leu Ile Ser Lys Lys Phe Thr Ile Glu Asn Ile Gln Asn  
 130 135 140  
 Ile Ser Ser Lys Cys Ser Cys Gly Asn Ser Phe Asp Ile Asp Phe Val  
 145 150 155 160

<210> 64  
 <211> 602  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 64

Met	Phe	Ser	Leu	Cys	Thr	Val	His	Ser	Asn	Met	Leu	Ile	Asn	Cys	Phe
1				5					10					15	
Gly	Val	Leu	His	Cys	Asn	Ile	Cys	Arg	Thr	Val	Leu	Arg	Asn	Cys	Phe
			20					25					30		
Leu	Ser	Gly	Thr	Ser	Asp	Leu	Gln	Lys	Cys	Ile	Ser	Cys	Gly	Glu	Lys
		35					40					45			
Tyr	Tyr	Lys	Ile	Ser	Pro	Cys	Thr	Gln	Asn	His	Glu	Val	Thr	Asp	Glu
	50					55					60				
Lys	Met	Lys	Asn	Leu	Ile	Thr	Lys	Ile	Ile	Glu	Ile	Ala	Ile	Asp	Arg
	65				70					75					80
His	Thr	Leu	Gly	Leu	His	Asp	Phe	Ser	Ser	Val	Ser	Asp	Glu	Tyr	Lys
				85					90					95	
Glu	Lys	Ile	Lys	Met	Leu	Cys	Met	Phe	Ser	Asn	Tyr	Lys	Asp	Asn	Tyr
			100					105					110		
Glu	Asn	Ala	Asn	Asn	His	Arg	Gln	Ala	Lys	Val	Glu	Ile	Val	Glu	Glu
		115					120					125			
His	Ile	His	Lys	Ile	Val	Glu	Ser	Tyr	Ile	Asn	Glu	Glu	Asn	Asn	Met
	130					135					140				
Glu	His	Met	Lys	Asp	Leu	Leu	Lys	Asn	Pro	Ala	Leu	Cys	Leu	Lys	Asn
145					150					155					160
Pro	Asn	Gln	Trp	Val	Lys	Asp	Arg	Ala	Gly	Phe	Lys	Asp	Asp	Asp	Lys
				165					170					175	
Pro	Ser	Val	Gly	Ile	Ile	Pro	Glu	Arg	Lys	Ile	Phe	Lys	Pro	Tyr	Asp
			180					185					190		
Ile	Lys	Thr	Leu	Lys	Ser	Ser	Leu	Tyr	Ala	Ser	Ser	Thr	Asn	Cys	Asp
		195					200					205			
Arg	Gln	Phe	Cys	Asp	Arg	Phe	Ser	Asp	Ser	Asn	Glu	Cys	Glu	His	Arg
	210					215					220				
Ile	Arg	Val	Leu	Asn	Gln	Gly	Lys	Cys	Gly	Asn	Cys	Trp	Val	Phe	Ala
225					230					235					240
Ser	Ser	Val	Val	Ile	Ala	Ala	Tyr	Arg	Cys	Arg	Lys	Gly	Leu	Gly	Phe
				245					250					255	
Ala	Glu	Pro	Ser	Ile	Lys	Tyr	Val	Thr	Leu	Cys	Lys	Asn	Lys	His	Leu
			260					265					270		
Met	Asp	Ile	Asp	Asn	Asn	Pro	Phe	Gly	His	Tyr	Asn	Asp	Asn	Ile	Cys
		275					280					285			
Lys	Glu	Gly	Gly	His	Leu	Ser	Tyr	Tyr	Leu	Glu	Thr	Leu	Glu	Lys	Thr
	290					295					300				
Arg	Met	Leu	Pro	Thr	Ser	His	Asp	Val	Pro	Tyr	Asn	Glu	Pro	Ile	Thr
305					310					315					320
Gly	Ser	Glu	Cys	Pro	Asp	Asn	Lys	Glu	Thr	Trp	Ser	Asn	Ile	Trp	Lys
				325					330					335	
Gly	Val	Asn	Leu	Met	Asp	Arg	Ile	Tyr	Ala	Gly	Tyr	Ile	Tyr	His	Gly
			340					345					350		
Tyr	Phe	Lys	Val	Ser	Phe	Lys	Asp	Tyr	Val	Val	Ser	Asn	Arg	Thr	Asn
		355					360					365			
Asp	Leu	Ile	Asn	Ile	Ile	Lys	Asp	Tyr	Ile	Ile	Gln	Gln	Gly	Ser	Val

370					375					380					
Phe	Val	Ser	Met	Glu	Val	Thr	Asp	Lys	Leu	Thr	Phe	Asp	His	Asp	Gly
385					390					395					400
Thr	Lys	Val	Met	Met	Ser	Cys	Glu	Asp	Asn	Asp	Ser	Pro	Asp	His	Ala
			405						410					415	
Leu	Val	Leu	Ile	Gly	Tyr	Gly	Asp	Tyr	Ile	Lys	Thr	Asn	Gly	Lys	Lys
			420					425					430		
Ser	Ser	Tyr	Trp	Leu	Leu	Arg	Asn	Ser	Trp	Gly	Ser	His	Trp	Gly	Asp
		435					440					445			
Lys	Gly	Asn	Phe	Lys	Leu	Asp	Met	Tyr	Gly	Pro	Asn	Asn	Cys	Asn	Gly
	450					455					460				
Lys	Val	Leu	Tyr	Asn	Ala	Phe	Pro	Leu	Leu	Leu	Asn	Met	Ala	His	Asn
465					470					475					480
Pro	Ile	Asp	Val	Pro	Leu	Pro	Asn	Asp	Leu	Ala	Ser	Thr	Asp	Ile	Arg
			485						490					495	
Val	Arg	Tyr	Arg	Gln	Ser	Asp	Phe	Asn	Gln	Asn	Arg	Asn	Arg	Asn	Asn
			500					505					510		
Tyr	Pro	Gln	Tyr	Asp	Lys	Asn	Ser	Asn	Asp	Asn	Asp	Arg	Asn	Tyr	Ile
		515					520					525			
Asn	Pro	Tyr	Asn	Lys	Asn	Asp	Asn	Asn	Tyr	Asn	Pro	Tyr	Asn	Lys	Pro
	530					535					540				
His	Tyr	Asn	Asp	Lys	Glu	Asn	Asp	Ala	Tyr	Tyr	Glu	Lys	Asn	Asp	Asp
545					550					555					560
Tyr	Asn	Asn	Ala	His	Ile	Arg	Arg	Asn	Thr	Ile	Arg	Phe	Lys	Lys	Arg
			565						570					575	
Ile	Ile	Lys	Tyr	Ser	Leu	Tyr	Ala	Arg	Ile	Gly	Asn	Thr	Val	Tyr	Lys
			580					585					590		
Arg	Thr	Ile	Phe	Ser	Lys	Ser	Thr	Cys	Asn						
		595					600								

<210> 65  
 <211> 946  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 65  
 Met Val Tyr Arg Leu Phe Ile Ile Leu Val Leu Tyr Val Ile Cys Cys  
 1 5 10 15  
 Thr Asn Val Ile Val Gly Gln Glu Lys Pro Pro Pro Asp Ser Thr Val  
 20 25 30  
 Gly Ala Asn Pro Gly Asp Glu Arg Glu Ser Ser Gly Arg Val Asn Asn  
 35 40 45  
 Pro Ala Ser Gly Glu Gln Gly Thr Thr Asn Ser Pro Thr Glu Gln Pro  
 50 55 60  
 Asp Gln Thr Arg Asp Arg Ser Ser Ser Val Pro Gln Gly Ser Pro Arg  
 65 70 75 80  
 Glu Pro Val Ser Pro Glu Asn Pro Asn Pro Val Thr Gln Ile Pro Gly  
 85 90 95  
 Asn Gly Gly Ala Leu Val Thr Pro Ile Pro Leu Pro Lys Leu Thr Leu

100					105					110					
Glu	Asp	Ser	Glu	Ser	Ser	Lys	Ser	Val	Ile	Asp	Ile	Glu	Val	Lys	Ser
		115					120					125			
Ala	Leu	Leu	Lys	Asn	Tyr	Asp	Gly	Val	Lys	Ile	Thr	Gly	Pro	Cys	Arg
	130					135					140				
Ser	Tyr	Phe	Arg	Val	Met	Leu	Val	Pro	His	Ile	Thr	Val	Tyr	Val	Tyr
145					150					155					160
Ala	Thr	Tyr	Asp	Arg	Ile	Gln	Leu	Glu	Pro	Lys	Phe	Gly	Pro	Ser	Asp
				165					170					175	
Leu	Ile	Asp	Ile	Asn	Asp	Leu	Thr	Asn	Lys	Cys	Asn	Lys	Asp	Ser	Asn
			180					185					190		
Lys	Tyr	Phe	Lys	Leu	Val	Leu	Tyr	Ile	Lys	Asn	Asn	Ile	Leu	Ile	Leu
		195					200					205			
Lys	Trp	Lys	Val	Gln	Asp	Lys	Asp	Ser	Lys	Pro	Thr	Asn	Ile	Asp	Val
	210					215					220				
Asp	Val	Lys	Lys	Tyr	Lys	Ile	Pro	Lys	Leu	Asp	Arg	Pro	Phe	Thr	Ser
225					230					235					240
Ile	Gln	Val	Tyr	Thr	Val	Asn	Thr	Glu	His	Gly	Leu	Ile	Glu	Ser	Lys
				245					250					255	
Asn	Tyr	Asp	Ile	Asn	Ser	Glu	Ile	Pro	Glu	Gln	Cys	Glu	Ala	Ile	Ser
			260					265					270		
Thr	Asn	Cys	Phe	Leu	Asn	Gly	Ser	Leu	Asp	Val	Glu	Asn	Cys	Tyr	His
		275					280					285			
Cys	Thr	Leu	Leu	Ala	Lys	Lys	Val	Asp	Ser	Asn	Asn	Glu	Cys	Phe	Asn
	290					295					300				
Tyr	Val	Ser	Lys	Glu	Ala	Lys	Glu	Leu	Ile	Asn	Lys	Asn	Leu	Glu	Glu
305					310					315					320
Lys	Asn	Lys	Thr	Phe	Lys	Gly	Glu	Asp	Glu	Asp	Leu	Asp	Ser	Asn	Glu
				325					330					335	
Gln	Lys	Leu	Glu	Glu	Ser	Ile	Asp	Asn	Ile	Leu	Ser	Asn	Ile	Tyr	Lys
			340					345					350		
Ile	Tyr	Glu	Ser	Lys	Gln	Asp	Lys	Glu	Arg	Lys	Lys	Ser	His	Tyr	Asn
		355					360					365			
Asn	Lys	Lys	Glu	Leu	Val	Thr	Ile	Glu	Glu	Leu	Asn	Ser	Val	Leu	Lys
		370				375					380				
Ile	Glu	Leu	Leu	Asn	Tyr	Cys	Lys	Leu	Leu	Lys	Glu	Val	Asp	Arg	Ser
385					390					395					400
Gly	Met	Leu	Asp	His	His	Glu	Ile	Gly	Asn	Glu	Ile	Asp	Ile	Phe	Asn
				405					410					415	
Asn	Leu	Ile	Arg	Leu	Leu	Lys	Ala	His	Pro	Gly	Glu	Ser	Thr	Tyr	Val
			420					425					430		
Leu	Asn	Glu	Lys	Leu	Arg	Asn	Pro	Ala	Leu	Cys	Phe	Lys	Asn	Ile	Glu
		435					440					445			
Glu	Trp	Leu	Val	Asn	Lys	Lys	Gly	Leu	Leu	Leu	Ser	Asn	Glu	Lys	Ile
	450					455					460				
Gln	Asn	Leu	Ser	Thr	Thr	Asn	Tyr	Asn	Val	Thr	Asp	Leu	Glu	Glu	Ser
465					470					475					480

Glu Tyr Asp Tyr Glu Arg Phe Ile Ser Asp Asp Met Phe Glu Lys Asp  
 485 490 495  
 Met Asn Gly Val Ile Asp Leu Ser Leu Phe Asp Asn Glu Lys Lys Leu  
 500 505 510  
 Lys Ser Pro Tyr Phe Arg Arg Asn Lys Tyr Cys Asn Asn Glu Tyr Cys  
 515 520 525  
 Asp Arg Trp Lys Asp Lys Thr Gly Cys Ile Ser Lys Ile Glu Val Glu  
 530 535 540  
 Glu Gln Gly Asn Cys Gly Leu Cys Trp Ile Phe Ala Ser Lys Leu His  
 545 550 555 560  
 Phe Glu Thr Ile Arg Cys Met Arg Gly Tyr Gly His Phe Arg Ser Ser  
 565 570 575  
 Ala Leu Tyr Val Ala Asn Cys Ser Asp Arg Asp Ser Asp Glu Ile Cys  
 580 585 590  
 Phe Val Gly Ser Asn Pro Val Glu Phe Leu Glu Ile Val Glu Glu Thr  
 595 600 605  
 Gly Phe Leu Pro Leu Glu Ser Asp Val Pro Tyr Tyr Tyr Thr Asp Ala  
 610 615 620  
 Gly Asn Asp Cys Pro Glu Pro Glu Lys Asn Trp Ile Asn Leu Trp Gly  
 625 630 635 640  
 Ser Thr Glu Leu Leu Asn His Lys Arg Pro Arg Gln Arg Met Thr Thr  
 645 650 655  
 Lys Gly Tyr Ile Ser Tyr Glu Ser Ser Tyr Phe Ser Asp Asn Met Asp  
 660 665 670  
 Leu Phe Ile Lys Ile Ile Lys Arg Glu Ile Gln Asn Lys Gly Ser Val  
 675 680 685  
 Ile Ala Tyr Ile Lys Thr Glu Asn Val Ile Asp Phe Asp Phe Asn Gly  
 690 695 700  
 Lys Gly Val His Asn Met Cys Gly Asp Lys Glu Pro Asp His Ala Ala  
 705 710 715 720  
 Asn Ile Ile Gly Tyr Gly Asn Tyr Ile Asp Glu Glu Gly Glu Lys Lys  
 725 730 735  
 Ser Tyr Trp Leu Ile Arg Asn Ser Trp Gly Tyr Tyr Trp Gly Asp Glu  
 740 745 750  
 Gly Asn Phe Arg Val Asp Met Tyr Gly Pro Ser Tyr Cys Lys Tyr Asn  
 755 760 765  
 Phe Ile His Thr Val Val Val Phe Lys Val Asp Leu Gly Ile Ile Glu  
 770 775 780  
 Val Pro Lys Lys Glu Lys Glu Ser Glu Tyr Phe Ser Tyr Phe Leu Lys  
 785 790 795 800  
 Tyr Thr Pro Asn Phe Leu Tyr Asn Leu Phe Phe Asn Asn Tyr Thr Thr  
 805 810 815  
 Asn Asp Glu Tyr Lys Leu Asn Asn Arg Leu Lys Thr Asn Gln His Asn  
 820 825 830  
 Asn Lys Lys Asn Lys Lys Asp Arg Tyr Ile Ser Ala Gln Asp Glu Pro  
 835 840 845

Pro Thr Asp Asn Val Glu Ser Gln Ala Glu Asn Asn Lys Lys Thr Glu  
850 855 860

Ile Tyr His Ile Leu Lys His Ile Lys Asp Lys Lys Ile Lys Arg Gly  
865 870 875 880

Leu Val Lys Tyr Glu Ser Leu Leu Glu Thr Lys Lys Asp His Ser Cys  
885 890 895

Ser Arg Thr His Ser Ile Asp Pro Glu Lys His Glu Glu Cys Asn Gln  
900 905 910

Phe Cys Ile Asp Asn Trp Lys Ala Cys Lys Asp His Tyr Ser Pro Gly  
915 920 925

Tyr Cys Leu Thr Lys Leu Tyr Thr Lys Asp Asp Asn Cys Phe Phe Cys  
930 935 940

Asn Val  
945

<210> 66  
<211> 1041  
<212> PRT  
<213> Plasmodium falciparum

<400> 66  
Met Ile Phe Phe Asn Phe Lys Leu Asn Arg Met Ile Cys Pro Ile Phe  
1 5 10 15

Phe Leu Tyr Ile Ile Asn Val Leu Phe Thr Gln Tyr Phe Ile Lys Cys  
20 25 30

Glu Gly Asn Lys Val Thr Val Ile Ser His Asn Asn Gly His Asn Asp  
35 40 45

Asn Leu Asp Val Asn Lys Asn Gly Val Ile Ser Gln Glu Asn Val Phe  
50 55 60

Asp Thr Ser Glu Ser Leu Asn Leu Pro Ser Asn Lys Lys Val Gly Ser  
65 70 75 80

Asp Asp Leu Asn Thr Thr Thr Ile Ser Phe Thr Val Pro Asp Asn Leu  
85 90 95

Glu Asn Glu Val Lys Val Val Ser Ser Ser Glu Ser Gly Lys Gly Ala  
100 105 110

Thr Val Ser His Thr Lys Val Thr Ser Glu Gly Leu Ser Asp Thr Gln  
115 120 125

Pro Asn Val Thr Gln Ser Val Ser Ser Ser Thr His Thr Pro Gly Ser  
130 135 140

Leu Asp Ser Thr Met Ser Thr Glu Gln His Ser Ser Val Ser Gln Ser  
145 150 155 160

Ser Leu Pro Thr Glu Ser Ser Ser Glu Thr Leu Asn Lys Ala Thr Val  
165 170 175

Pro Glu Ile Pro Ile Gln Ile Asn Ser Gly Leu Leu Lys Asn Tyr Asn  
180 185 190

Gly Val Lys Val Thr Gly Ser Cys Gly Ser Tyr Phe Arg Val Tyr Leu  
195 200 205

Val Pro His Ile Leu Ile Tyr Ala Leu Thr Lys Tyr Ser Val Ile Gln  
210 215 220

Leu Glu Ser Leu Phe Asn Asp Asn Ala Arg Ile Asp Val Glu His Phe  
 225 230 235 240  
 Gly Glu Leu Gln Asn Lys Cys Ser Glu Gly Tyr His Phe Lys Leu Val  
 245 250 255  
 Val Tyr Ile Thr His Asn Val Leu Asn Leu Lys Trp Lys Thr Tyr Lys  
 260 265 270  
 Pro Asn Glu Glu Ser Lys Ser Glu Asp Ser Asp Val Arg Lys Tyr Arg  
 275 280 285  
 Ile Pro Lys Leu Glu Arg Pro Phe Thr Ser Ile Gln Val Tyr Thr Ala  
 290 295 300  
 Asn Ser Lys Ala Gly Val Ile Glu Thr Lys Asn Tyr Asn Ile Arg Thr  
 305 310 315 320  
 Asp Ile Pro Asp Thr Cys Asp Ala Ile Ala Thr Asp Cys Phe Leu Asn  
 325 330 335  
 Gly Asn Val Asn Ile Glu Lys Cys Phe Gln Cys Thr Leu Leu Val Gln  
 340 345 350  
 Lys Lys Asp Lys Ser His Glu Cys Phe Lys Tyr Val Ser Ser Glu Met  
 355 360 365  
 Lys Lys Lys Met Asn Glu Ile Lys Val Lys Ala Gln Asp Asp Phe Asn  
 370 375 380  
 Pro Asn Glu Tyr Lys Leu Ile Glu Ser Ile Asp Asn Ile Leu Ser Lys  
 385 390 395 400  
 Ile Tyr Lys Lys Ala Asn Lys Pro Phe Glu Ile Ser Lys Asp Leu Ile  
 405 410 415  
 Asn Leu Glu Asp Leu Asp Tyr Gln Phe Lys Asn Glu Leu Leu Glu Tyr  
 420 425 430  
 Cys Lys Leu Leu Lys Lys Val Asp Thr Ser Gly Thr Leu Glu Glu Tyr  
 435 440 445  
 Glu Leu Gly Asn Ala Glu Asp Ile Tyr Asn Asn Leu Thr Arg Leu Leu  
 450 455 460  
 Lys Ser His Ser Asp Glu Asn Ile Val Thr Leu Gln Gly Lys Leu Arg  
 465 470 475 480  
 Asn Thr Ala Ile Cys Ile Lys Asn Val Asp Glu Trp Ile Leu Asn Lys  
 485 490 495  
 Arg Gly Leu Thr Leu Pro Ser Glu Ser Pro Ser Glu Ser Ser Ser Lys  
 500 505 510  
 Ser Asp Ser Tyr Leu Asn Thr Phe Asn Asp Lys Asp Lys Asn Glu Asp  
 515 520 525  
 Lys Asp Asp Met Ser Lys Asn Ser Lys Glu Glu Phe Lys Asn Asp Asp  
 530 535 540  
 Lys Glu Asn Ser Asp Asp Gln Asn Asn Asn Asp Ser Asn Lys Lys Asp  
 545 550 555 560  
 Asp Glu Asn Asn Ile Asn Asn Gly Asp Thr Asn Tyr Val Tyr Asp Phe  
 565 570 575  
 Asp Asp Asp Asp Tyr Asp Asn Asn Ser Tyr Glu Lys Asp Met Tyr Glu  
 580 585 590  
 Ser Pro Ile Lys Glu Asn Lys Asn Gly Val Ile Asp Leu Glu Lys Tyr



125

Leu Val Lys Tyr Asp Asn Ile Asn Glu Thr Lys Asp Glu His Thr Cys  
 980 985 990  
 Ser Arg Val Asn Ser Gln Asp Ala Glu Lys Tyr Glu Glu Cys Lys Lys  
 995 1000 1005  
 Phe Cys Leu Thr Lys Trp Asn Glu Cys Lys Asp His Tyr Ser Pro Gly  
 1010 1015 1020  
 Tyr Cys Leu Thr Asp Leu Tyr Lys Gly Glu Asp Cys Asn Phe Cys Tyr  
 1025 1030 1035 1040  
 Val

<210> 67  
 <211> 997  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 67  
 Met Lys Ser Tyr Ile Ser Leu Phe Phe Ile Leu Cys Val Ile Phe Asn  
 1 5 10 15  
 Lys Asn Val Ile Lys Cys Thr Gly Glu Ser Gln Thr Gly Asn Thr Gly  
 20 25 30  
 Gly Gly Gln Ala Gly Asn Thr Gly Gly Asp Gln Ala Gly Ser Thr Gly  
 35 40 45  
 Gly Ser Pro Gln Gly Ser Thr Gly Ala Ser Pro Gln Gly Ser Thr Gly  
 50 55 60  
 Ala Ser Pro Gln Gly Ser Thr Gly Ala Ser Gln Pro Gly Ser Ser Glu  
 65 70 75 80  
 Pro Ser Asn Pro Val Ser Ser Gly His Ser Val Ser Thr Val Ser Val  
 85 90 95  
 Ser Gln Thr Ser Thr Ser Ser Glu Lys Gln Asp Thr Ile Gln Val Lys  
 100 105 110  
 Ser Ala Leu Leu Lys Asp Tyr Met Gly Leu Lys Val Thr Gly Pro Cys  
 115 120 125  
 Asn Glu Asn Phe Ile Met Phe Leu Val Pro His Ile Tyr Ile Asp Val  
 130 135 140  
 Asp Thr Glu Asp Thr Asn Ile Glu Leu Arg Thr Thr Leu Lys Lys Thr  
 145 150 155 160  
 Asn Asn Ala Ile Ser Phe Glu Ser Asn Ser Gly Ser Leu Glu Lys Lys  
 165 170 175  
 Lys Tyr Val Lys Leu Pro Ser Asn Gly Thr Thr Gly Glu Gln Gly Ser  
 180 185 190  
 Ser Thr Gly Thr Val Arg Gly Asp Thr Glu Pro Ile Ser Asp Ser Ser  
 195 200 205  
 Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser  
 210 215 220  
 Ser Ser Ser Ser Ser Ser Ser Ser Ser Glu Ser Leu Pro Ala Asn Gly  
 225 230 235 240  
 Pro Asp Ser Pro Thr Val Lys Pro Pro Arg Asn Leu Gln Asn Ile Cys  
 245 250 255

Glu Thr Gly Lys Asn Phe Lys Leu Val Val Tyr Ile Lys Glu Asn Thr  
 260 265 270  
 Leu Ile Leu Lys Trp Lys Val Tyr Gly Glu Thr Lys Asp Thr Thr Glu  
 275 280 285  
 Asn Asn Lys Val Asp Val Arg Lys Tyr Leu Ile Asn Glu Lys Glu Thr  
 290 295 300  
 Pro Phe Thr Asn Ile Leu Ile His Ala Tyr Lys Glu His Asn Gly Thr  
 305 310 315 320  
 Asn Leu Ile Glu Ser Lys Asn Tyr Ala Ile Gly Ser Asp Ile Pro Glu  
 325 330 335  
 Lys Cys Asp Thr Leu Ala Ser Asn Cys Phe Leu Ser Gly Asn Phe Asn  
 340 345 350  
 Ile Glu Lys Cys Phe Gln Cys Ala Leu Leu Val Glu Lys Glu Asn Lys  
 355 360 365  
 Asn Asp Val Cys Tyr Lys Tyr Leu Ser Glu Asp Ile Val Ser Lys Phe  
 370 375 380  
 Lys Glu Ile Lys Ala Glu Thr Glu Asp Asp Asp Glu Asp Asp Tyr Thr  
 385 390 395 400  
 Glu Tyr Lys Leu Thr Glu Ser Ile Asp Asn Ile Leu Val Lys Met Phe  
 405 410 415  
 Lys Thr Asn Glu Asn Asn Asp Lys Ser Glu Leu Ile Lys Leu Glu Glu  
 420 425 430  
 Val Asp Asp Ser Leu Lys Leu Glu Leu Met Asn Tyr Cys Ser Leu Leu  
 435 440 445  
 Lys Asp Val Asp Thr Thr Gly Thr Leu Asp Asn Tyr Gly Met Gly Asn  
 450 455 460  
 Glu Met Asp Ile Phe Asn Asn Leu Lys Arg Leu Leu Ile Tyr His Ser  
 465 470 475 480  
 Glu Glu Asn Ile Asn Thr Leu Lys Asn Lys Phe Arg Asn Ala Ala Val  
 485 490 495  
 Cys Leu Lys Asn Val Asp Asp Trp Ile Val Asn Lys Arg Gly Leu Val  
 500 505 510  
 Leu Pro Glu Leu Asn Tyr Asp Leu Glu Tyr Phe Asn Glu His Leu Tyr  
 515 520 525  
 Asn Asp Lys Asn Ser Pro Glu Asp Lys Asp Asn Lys Gly Lys Gly Val  
 530 535 540  
 Val His Val Asp Thr Thr Leu Glu Lys Glu Asp Thr Leu Ser Tyr Asp  
 545 550 555 560  
 Asn Ser Asp Asn Met Phe Cys Asn Lys Glu Tyr Cys Asn Arg Leu Lys  
 565 570 575  
 Asp Glu Asn Asn Cys Ile Ser Asn Leu Gln Val Glu Asp Gln Gly Asn  
 580 585 590  
 Cys Asp Thr Ser Trp Ile Phe Ala Ser Lys Tyr His Leu Glu Thr Ile  
 595 600 605  
 Arg Cys Met Lys Gly Tyr Glu Pro Thr Lys Ile Ser Ala Leu Tyr Val  
 610 615 620

Ala	Asn	Cys	Tyr	Lys	Gly	Glu	His	Lys	Asp	Arg	Cys	Asp	Glu	Gly	Ser	
625					630					635					640	
Ser	Pro	Met	Glu	Phe	Leu	Gln	Ile	Ile	Glu	Asp	Tyr	Gly	Phe	Leu	Pro	
				645					650					655		
Ala	Glu	Ser	Asn	Tyr	Pro	Tyr	Asn	Tyr	Val	Lys	Val	Gly	Glu	Gln	Cys	
			660					665					670			
Pro	Lys	Val	Glu	Asp	His	Trp	Met	Asn	Leu	Trp	Asp	Asn	Gly	Lys	Ile	
		675					680					685				
Leu	His	Asn	Lys	Asn	Glu	Pro	Asn	Ser	Leu	Asp	Gly	Lys	Gly	Tyr	Thr	
	690					695					700					
Ala	Tyr	Glu	Ser	Glu	Arg	Phe	His	Asp	Asn	Met	Asp	Ala	Phe	Val	Lys	
705					710					715					720	
Ile	Ile	Lys	Thr	Glu	Val	Met	Asn	Lys	Gly	Ser	Val	Ile	Ala	Tyr	Ile	
				725					730					735		
Lys	Ala	Glu	Asn	Val	Met	Gly	Tyr	Glu	Phe	Ser	Gly	Lys	Lys	Val	Gln	
			740					745					750			
Asn	Leu	Cys	Gly	Asp	Asp	Thr	Ala	Asp	His	Ala	Val	Asn	Ile	Val	Gly	
		755					760					765				
Tyr	Gly	Asn	Tyr	Val	Asn	Ser	Glu	Gly	Glu	Lys	Lys	Ser	Tyr	Trp	Ile	
	770					775					780					
Val	Arg	Asn	Ser	Trp	Gly	Pro	Tyr	Trp	Gly	Asp	Glu	Gly	Tyr	Phe	Lys	
785					790					795					800	
Val	Asp	Met	Tyr	Gly	Pro	Thr	His	Cys	His	Phe	Asn	Phe	Ile	His	Ser	
				805					810					815		
Val	Val	Ile	Phe	Asn	Val	Asp	Leu	Pro	Met	Asn	Asn	Lys	Thr	Thr	Lys	
			820					825					830			
Lys	Glu	Ser	Lys	Ile	Tyr	Asp	Tyr	Tyr	Leu	Lys	Ala	Ser	Pro	Glu	Phe	
		835					840					845				
Tyr	His	Asn	Leu	Tyr	Phe	Lys	Asn	Phe	Asn	Val	Gly	Lys	Lys	Asn	Leu	
	850					855					860					
Phe	Ser	Glu	Lys	Glu	Asp	Asn	Glu	Asn	Asn	Lys	Lys	Leu	Gly	Asn	Asn	
865					870					875				880		
Tyr	Ile	Ile	Phe	Gly	Gln	Asp	Thr	Ala	Gly	Ser	Gly	Gln	Ser	Gly	Lys	
				885					890					895		
Glu	Ser	Asn	Thr	Ala	Leu	Glu	Ser	Ala	Gly	Thr	Ser	Asn	Glu	Val	Ser	
			900					905					910			
Glu	Arg	Val	His	Val	Tyr	His	Ile	Leu	Lys	His	Ile	Lys	Asp	Gly	Lys	
		915					920					925				
Ile	Arg	Met	Gly	Met	Arg	Lys	Tyr	Ile	Asp	Thr	Gln	Asp	Val	Asn	Lys	
	930					935					940					
Lys	His	Ser	Cys	Thr	Arg	Ser	Tyr	Ala	Phe	Asn	Pro	Glu	Asn	Tyr	Glu	
945					950					955					960	
Lys	Cys	Val	Asn	Leu	Cys	Asn	Val	Asn	Trp	Lys	Thr	Cys	Glu	Glu	Lys	
				965					970					975		
Thr	Ser	Pro	Gly	Leu	Cys	Leu	Ser	Lys	Leu	Asp	Thr	Asn	Asn	Glu	Cys	
			980					985					990			
Tyr	Phe	Cys	Tyr	Val												

<210> 68  
 <211> 962  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 68

Met Lys Ile His Ile Phe Leu Ile Ala Thr Ile Tyr Val Leu Phe Ser  
 1 5 10 15  
 Glu Lys Leu Ile Lys Trp Thr Thr Ala Ser Thr Thr Gln Gly Gly Asp  
 20 25 30  
 Thr Asp Thr His Pro Gly Thr Pro Pro Gly Glu Gly Ser Asp Val Ser  
 35 40 45  
 Gln Gly Ala Gly Gln Asp Ala Ser Gln Gly Ala Gly Gln Asp Ala Asn  
 50 55 60  
 Pro Asp Pro Thr Leu Pro Lys Pro Pro Ser Pro Pro Ala Asp Asp Thr  
 65 70 75 80  
 Lys Asp Thr Gly Ser Gln Gly Asp Ala Asp Ser Ser Ser Ser Lys Ile  
 85 90 95  
 Glu Ile Pro Pro Leu Val Lys Pro Glu Asn His Lys Thr Ile Val Ser  
 100 105 110  
 Ala Met Leu Lys Asn Tyr Lys Gly Val Lys Val Thr Gly Thr Cys Gly  
 115 120 125  
 Ala Asp Phe Gly Leu Phe Leu Val Pro His Ile Tyr Val His Val Lys  
 130 135 140  
 Ser Glu Asp Thr Glu Ile Glu Leu Ser Ser Glu Leu Ala Pro Pro Glu  
 145 150 155 160  
 Met Gln Thr Lys Phe Asp Lys Thr Gln Leu Lys Lys Phe Cys Val Lys  
 165 170 175  
 Asp Asp Thr Lys Lys Phe Asp Phe Ile Ala Tyr Ile Tyr Lys Asp Ile  
 180 185 190  
 Leu Val Phe Lys Trp Lys Val Tyr Glu Glu Gly Leu Ser Lys Glu Gln  
 195 200 205  
 Asp Val Asp Glu Met Lys Tyr Leu Leu Pro Asn Leu Lys Gln Pro Ile  
 210 215 220  
 Thr Ser Ile Gln Val His Ser Trp Thr Gly Thr Lys Glu Ser Tyr Ile  
 225 230 235 240  
 Leu Glu Ser Lys Asp Tyr Val Leu Gly Glu Gly Met Pro Glu Lys Cys  
 245 250 255  
 Asp Ala Ile Ala Thr Asp Cys Phe Leu Ser Gly Phe Thr Asp Ile Gly  
 260 265 270  
 Lys Cys Phe Gln Cys Lys Leu Leu Met Gln Glu Lys Asn Ile Asn Asp  
 275 280 285  
 Ser Cys Phe Lys Tyr Val Ser Ser Asn Gln Lys Glu Leu Ile Lys Lys  
 290 295 300  
 Gln Leu Lys Ile Thr Ala Gln Asp Asp Glu Glu Ser Ser Glu Tyr His  
 305 310 315 320  
 Leu Ser Glu Ser Ile Lys Asn Leu Leu Lys Asn Ile Tyr Lys Lys Asn

325

330

335

Asn	Asp	Asp	Asn	Lys	Lys	Lys	Glu	Leu	Leu	His	Phe	Glu	Asn	Val	Asn	
			340					345					350			
Ser	Ala	Leu	Lys	Ser	Glu	Leu	Leu	Asn	Tyr	Cys	Asn	Leu	Leu	Lys	Glu	
		355					360					365				
Val	Asn	Met	Asn	Gly	Val	Leu	Lys	Asp	His	Gln	Leu	Gly	Asn	Val	Gln	
		370				375					380					
Asp	Val	Phe	Asn	Asn	Leu	Thr	Lys	Leu	Leu	Glu	Glu	His	Lys	Glu	Glu	
		385			390					395					400	
Asn	Asp	Asn	Val	Leu	Tyr	His	Lys	Met	Lys	Asn	Glu	Ala	Leu	Cys	Leu	
			405						410					415		
Lys	Asn	Val	Asn	Asp	Trp	Met	Lys	Asn	Lys	Thr	Gly	Leu	Leu	Leu	Pro	
			420					425					430			
Gln	Leu	Ser	Tyr	Asp	Leu	Thr	Tyr	Lys	Asn	Asn	Asn	Phe	Thr	Glu	Phe	
		435					440					445				
Thr	Gln	Asn	Lys	Ser	Tyr	Thr	Ser	Gln	Asn	Ile	Val	Asp	Lys	Leu	Tyr	
		450				455					460					
Cys	Asn	His	Glu	Tyr	Cys	Asn	Arg	Leu	Lys	Asp	His	Asn	Asn	Cys	Ile	
		465			470					475					480	
Ser	Lys	Ile	Asn	Val	Glu	Asp	Gln	Lys	Asn	Cys	Ala	Leu	Ser	Trp	Ala	
			485						490					495		
Phe	Ala	Ser	Lys	Tyr	His	Leu	Glu	Thr	Ile	Lys	Cys	Met	Lys	Gly	Tyr	
			500					505					510			
Glu	Pro	Leu	Asn	Ala	Ser	Val	Leu	Tyr	Val	Thr	Asn	Cys	Leu	Lys	Asn	
		515					520					525				
Lys	Asn	Lys	Asp	Val	Cys	Thr	Glu	Gly	Ser	Asn	Pro	Leu	Val	Phe	Leu	
		530				535					540					
Glu	Thr	Ile	Glu	Glu	Lys	Gly	Phe	Leu	Pro	Thr	Glu	Ser	Asn	Tyr	Pro	
		545			550					555					560	
Tyr	Asp	Gln	Ser	Lys	Val	Gly	Asp	Ile	Cys	Pro	Gln	Leu	Gln	Asn	Asp	
			565						570					575		
Trp	Asp	Asn	Val	Phe	Glu	Asn	Thr	Lys	Val	Leu	Asp	Tyr	Asn	Asn	Gly	
			580					585					590			
Pro	Phe	Ser	Val	Gly	Thr	Lys	Gly	Tyr	Ile	Ala	Tyr	Glu	Ser	Glu	Ala	
		595					600					605				
Phe	Gln	Lys	Asp	Met	His	Ser	Phe	Val	Lys	Leu	Val	Lys	Asp	Glu	Ile	
		610				615					620					
Met	Asn	Lys	Gly	Ser	Val	Ile	Ala	Tyr	Val	Lys	Ala	Glu	Asn	Val	Leu	
					630					635					640	
Gly	Tyr	Glu	Leu	Asn	Gly	Lys	Lys	Val	Gln	Asn	Leu	Cys	Gly	Asp	Lys	
				645					650					655		
Thr	Pro	Asp	His	Val	Val	Asn	Ile	Val	Gly	Tyr	Gly	Asn	Tyr	Ile	Asn	
			660					665					670			
Asn	Lys	Gly	Glu	Lys	Lys	Ser	Tyr	Trp	Ile	Val	Arg	Asn	Ser	Trp	Gly	
		675					680					685				
Lys	Tyr	Trp	Gly	Asp	Asp	Gly	Tyr	Phe	Lys	Val	Asp	Met	Tyr	Gly	Pro	
		690				695					700					

Ser Thr Cys Glu Asp Asn Phe Ile His Thr Val Val Val Phe Asn Val  
 705 710 715 720  
 Gln Val Pro Ile Asn Glu Lys Phe Asp Lys Lys Glu His Asp Ile Tyr  
 725 730 735  
 Asn Tyr Tyr Leu Lys Thr Ser Pro Glu Phe Tyr His Asn Leu Tyr Tyr  
 740 745 750  
 Lys Thr Phe Asn Ser Asn Lys Glu Glu Lys Ser Met Asn Lys Asn Ser  
 755 760 765  
 Tyr Val Tyr Gly Gln Asp Thr Thr Pro Val Glu Asn Glu Ala Pro Arg  
 770 775 780  
 Ser Gly Val Gln Lys Pro Thr Glu Leu Ser Ser Thr Glu Ser Gln Thr  
 785 790 795 800  
 Val Ser Pro Pro Asn Glu Ser Gln Thr Glu Ser Leu Leu Ser Gly Gly  
 805 810 815  
 Ser Gln Val Thr Asn Pro Thr Leu Thr Gln Ser Thr Ser Ser Ser Ser  
 820 825 830  
 Gly Gln Gln Glu Thr Gly Pro Leu Ser Thr Gln Gly Leu Ser Pro Ala  
 835 840 845  
 Thr Gly Asp Pro Lys Gly Lys Glu Gln Glu Ala Ser Pro Ala Glu Gly  
 850 855 860  
 Leu Ser Gly Val Leu Asn Pro Thr Lys Glu Val Thr Ser Glu Glu Lys  
 865 870 875 880  
 Ile Gln Ile Ile His Leu Leu Lys His Ile Lys Asn Ser Lys Ile Arg  
 885 890 895  
 Arg Gly Leu Val Lys Tyr Asn His Glu Phe Glu Val Gly Asp Asn Ser  
 900 905 910  
 Cys Ser Arg Ser Thr Ser Lys Asn Ala Glu Met His Asp Glu Cys Val  
 915 920 925  
 Asn Ile Cys Glu Lys Tyr Trp Pro Glu Cys Arg Gly Thr Ala Val Pro  
 930 935 940  
 Gly Tyr Cys Leu Ser Thr His Asp Asp Lys Asn Glu Cys Asp Phe Cys  
 945 950 955 960  
 Tyr Val

<210> 69  
 <211> 930  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 69  
 Met Lys Phe Ser Ile Ser Leu Phe Leu Ile Leu Cys Val Leu Phe Cys  
 1 5 10 15  
 Lys Asn Asp Ile Lys Cys Thr Thr Val Asp Glu Ser Thr Lys Glu Gly  
 20 25 30  
 Ser Gln Asn Pro Lys Asn Ser Ser Ser Thr Thr Pro Ala Ser Gly Ser  
 35 40 45  
 Gln Lys Gly Ser Ser Ser Glu Ser Pro Gly Ser Ser Val Glu Lys Gln  
 50 55 60

Ser Gln Glu Ser Asn Lys Glu Ser Thr Asn Gly Gly Asn Val Val Ser  
 65 70 75 80  
 Gln Gly Thr Pro Ala Asn Thr Phe Gly Gln Asn Ser Asn Asn Pro Ser  
 85 90 95  
 Asp Ser Pro Gln Gly Thr Ser Thr Leu Pro Ser Pro Pro Lys Ser Ile  
 100 105 110  
 Asp Val Lys Ser Ala Phe Leu Lys His Tyr Lys Gly Val Lys Val Thr  
 115 120 125  
 Gly Ser Cys Asn Ala Asn Phe Gln Leu Phe Leu Val Pro His Ile Phe  
 130 135 140  
 Ile Asn Val Glu Thr Lys Glu Asn Asn Ile Gln Leu Asp Val Lys Phe  
 145 150 155 160  
 Leu Lys Leu Thr Lys Arg Ile Asp Phe Ala Lys Asp Lys Ser Met Leu  
 165 170 175  
 Lys Asn Lys Cys Glu Ser Gly Lys Asn Gln Thr Phe Lys Phe Val Leu  
 180 185 190  
 Tyr Phe Lys Asp Asp Ile Leu Thr Ile Lys Trp Lys Val Tyr Glu Glu  
 195 200 205  
 Lys Ser Ala Thr Pro Gln Lys Ser Glu Glu Asn Thr Val Asp Ile Lys  
 210 215 220  
 Leu Tyr Lys Leu Pro Lys Leu Asp Gln Thr Ile Thr Ser Ile Gln Val  
 225 230 235 240  
 His Thr Leu Ser Ile Glu Gly Thr Ser Tyr Leu Met Glu Ser Lys Asp  
 245 250 255  
 Tyr Ser Leu Gly Asn Asn Leu Pro Glu Lys Cys Asp Ala Ile Ala Ser  
 260 265 270  
 Asp Cys Phe Leu Ser Gly Asn Ile Asn Val Glu Lys Cys Leu Lys Cys  
 275 280 285  
 Thr Leu Lys Val Lys Lys Val Glu Ala Ser Asp Glu Cys Tyr Lys Tyr  
 290 295 300  
 Val Ser Lys Asp Lys Pro Lys Glu Thr Lys Leu Ala Val Ser Gly Ser  
 305 310 315 320  
 Glu Val Lys Glu Val Lys Ala Ala Ser Val Asp His Ser Asn Asp Lys  
 325 330 335  
 Glu Tyr Glu Leu Ser Gln Ser Ile Asn Asn Ile Leu Asn Lys Met Tyr  
 340 345 350  
 Lys Lys Glu Ser Asn Asp Glu Lys Asn Asn Lys Lys Glu Leu Ile Lys  
 355 360 365  
 Leu Glu Asp Ala Asp Asp Ser Leu Gln Lys Glu Leu Asn Lys Tyr Cys  
 370 375 380  
 Asn Ser Leu Lys Glu Val Asp Leu Asn Gly Val Leu Ser Lys Asn Glu  
 385 390 395 400  
 Val Gly Asn Glu Lys Asp Val Phe Asn Asn Leu Thr Thr Leu Leu Lys  
 405 410 415  
 Glu His Met Leu Glu Ser His His Val Phe Glu Lys Leu Lys Asn  
 420 425 430



Ser Ala Leu Cys Leu Lys Asn Ile Asp Asp Trp Leu Lys Asn Lys Asn  
 435 440 445  
 Gly Leu Ile Val Pro Pro Ser Lys Tyr Lys Leu Lys Asp Thr Asn Glu  
 450 455 460  
 Lys Lys Glu Leu Asn Asn Asn Val Glu Val Ile Glu Asp Met Phe Lys  
 465 470 475 480  
 Ala Asn Glu His Gly Ile Val Asp Leu Thr Lys Phe Pro Ile Asp Thr  
 485 490 495  
 Asn Tyr Ser Ser Tyr Lys His Ile Asp His Thr Tyr Cys Asn Asn Asp  
 500 505 510  
 Tyr Cys Asn Trp Ser Lys Asp Lys Asn Ser Cys Ile Ser Lys Ile Asn  
 515 520 525  
 Val Glu Asp Gln Lys Asn Cys Ala Leu Ser Trp Ala Phe Ala Ser Lys  
 530 535 540  
 Tyr His Leu Glu Thr Ile Lys Cys Met Lys Gly Tyr Glu His Ile Pro  
 545 550 555 560  
 Ile Ser Ser Leu Tyr Ile Ala Asn Cys Ser Lys Asn Glu Lys Lys Asp  
 565 570 575  
 Val Cys Thr Glu Gly Ser Asn Pro Leu Lys Val Leu Gln Met Ile Val  
 580 585 590  
 Glu Lys Gly Phe Leu Pro Thr Glu Gly Asp Tyr Ser Tyr Glu Gln Ser  
 595 600 605  
 Lys Val Gly Glu Thr Cys Pro Glu Val Gln Asn Gly Trp Val Asn Leu  
 610 615 620  
 Trp Ala Asn Ala Lys Leu Leu Glu Gln Asn Asn Asp Glu His Asn Ser  
 625 630 635 640  
 Leu Ser Thr Lys Gly Tyr Thr Ala Tyr Glu Ser Glu Ala Phe Gln Lys  
 645 650 655  
 Asp Met His Ser Phe Val Lys Leu Ile Lys Asp Glu Ile Met Asn Lys  
 660 665 670  
 Gly Ser Val Ile Ala Tyr Val Lys Ala Asp Lys Ile Met Ala Tyr Glu  
 675 680 685  
 Phe Asn Gly Lys Lys Val Gln Asn Leu Cys Gly Asp Lys Thr Pro Asp  
 690 695 700  
 His Ala Val Asn Ile Ile Gly Tyr Gly Asn Tyr Ile Asn Asp Glu His  
 705 710 715 720  
 Gln Lys Lys Ser Tyr Trp Ile Val Arg Asn Ser Trp Gly Lys His Trp  
 725 730 735  
 Gly Asp Lys Gly His Phe Lys Val Asp Met Tyr Gly Pro Ser Asp Cys  
 740 745 750  
 Glu Asp Asn Phe Ile His Ser Val Val Ile Phe Asn Val Asp Leu Pro  
 755 760 765  
 Ile Asn Gln Glu Ser Val Lys Lys Glu Pro Lys Ile Tyr Asn Tyr Tyr  
 770 775 780  
 Leu Lys Ala Ser Pro Asp Phe Tyr His Asn Leu Tyr Tyr Lys Asn Phe  
 785 790 795 800  
 Asp Ser Gln Lys Gly Lys Ala Asp Gln Ala Glu Asn Lys Lys Ser Tyr

805 810 815  
 Leu Tyr Gly Gln Glu Glu Ser Thr Ser Glu Gln Leu Pro Ser Ser Leu  
 820 825 830  
 Ser Ser Pro Gln Asn Asn Lys Gln Ser Glu Arg Ser Lys Glu Lys Val  
 835 840 845  
 Asp Ile Phe His Val Leu Lys His Ile Lys Asp Ser Lys Ile Lys Met  
 850 855 860  
 Gly Ile Val Lys Tyr Asp His Ser Asp Ala Leu Gly Glu Asp Asn Val  
 865 870 875 880  
 Cys Ser Arg Ser Tyr Ser Ser Asn Pro Glu Lys Gln Glu Gly Cys Val  
 885 890 895  
 Lys Phe Cys Asn Glu Asn Trp Gly Lys Cys Lys Asp Ala Ala Ser Pro  
 900 905 910  
 Gly Phe Cys Leu Ser Glu Leu Glu Lys Thr Asn Asp Cys Phe Phe Cys  
 915 920 925  
 Tyr Ile  
 930

<210> 70  
 <211> 1100  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 70  
 Met Lys Phe His Ile Ser Phe Phe Leu Ile Leu Tyr Ile Val Phe Phe  
 1 5 10 15  
 Lys Asn Thr Ile Lys Ser Glu Thr Thr Thr Asp Glu Ser Ala Thr Gly  
 20 25 30  
 Ser Leu Ser Ser Asp Gly Ser Arg Val Thr Thr Gln Ala Arg Ile Glu  
 35 40 45  
 Lys Pro Lys Gln Gln Pro Thr Leu Pro Thr Leu Ala Gln Glu Thr Gln  
 50 55 60  
 Pro Gln Gln Gln Gln Gln Gln Lys Glu Val Gly Ser Gly Ile Gly Ala  
 65 70 75 80  
 Glu Gln Lys Val Glu Ser Ala Arg Pro Gly Ala Glu Val Ser Gln Ser  
 85 90 95  
 Asp Val Glu Arg Ala Gly Arg Ser Ser Gly Thr Gly Gly Ser Val Gly  
 100 105 110  
 Thr Lys Ile Ser Pro Gly Ser Gln Gly Gln Gly Lys Val Ala Gly Pro  
 115 120 125  
 Gln Leu Pro Arg Leu Pro Gln Leu Pro Gln Ser Phe Glu Gln Ser Arg  
 130 135 140  
 Asn Gln Gln Ser Ser Pro Val Thr Pro Lys Arg Asn Gly Ile Ser Pro  
 145 150 155 160  
 Thr Asn Ala Lys Ser Pro Glu Ser Val Leu Pro Pro Ala Gln Ser Phe  
 165 170 175  
 Thr Asn Leu Asn Lys Ser Thr Ile Pro His Thr Ile Pro Ile Lys Ser  
 180 185 190  
 Ser Phe Leu Lys Tyr Tyr Lys Gly Val Lys Ile Thr Gly Ser Cys Gly

195					200					205					
Val	Gln	Phe	Gln	Leu	Val	Ile	Val	Pro	His	Leu	Phe	Ile	Tyr	Val	Glu
210					215					220					
Thr	Lys	Glu	Asn	Asn	Ile	Gln	Leu	Glu	Pro	Arg	Phe	Met	Lys	Leu	Asn
225					230					235					240
Glu	Arg	Ile	Asp	Phe	Glu	Lys	Asp	Lys	Ser	Asn	Leu	Lys	Asn	Lys	Cys
				245					250					255	
Asp	Val	Asn	Lys	Lys	Gln	Ser	Phe	Lys	Phe	Ile	Leu	Tyr	Leu	Gln	His
			260					265					270		
Asp	Leu	Ile	Thr	Ile	Lys	Trp	Lys	Val	Tyr	Glu	Glu	Lys	Pro	Asp	Thr
			275				280					285			
Thr	Thr	Arg	Ile	Asp	Leu	Asn	Val	Asp	Val	Lys	Arg	Tyr	Lys	Leu	Pro
			290			295					300				
Lys	Leu	Asp	Gln	Pro	Val	Ile	Ser	Ile	Gln	Ile	His	Ser	Leu	Ala	Gln
305					310					315					320
Asp	Gly	Glu	Thr	Tyr	Leu	Met	Glu	Ser	Lys	Asp	Tyr	Asn	Leu	Glu	Asp
				325					330					335	
Gln	Ile	Pro	Glu	Lys	Cys	Glu	Ala	Ile	Ala	Ser	Asp	Cys	Phe	Leu	Ser
			340					345					350		
Gly	Asn	Val	Asp	Ile	Glu	Lys	Cys	Leu	Gln	Cys	Thr	Leu	Leu	Val	Ile
			355				360					365			
Lys	Ala	Asp	Lys	Asn	Asp	Glu	Cys	Leu	Lys	Tyr	Val	Ser	Lys	Asn	Val
			370			375					380				
Lys	Asp	Arg	Phe	Glu	Glu	Ile	Leu	Thr	Lys	Gly	Glu	Asp	Asp	Ala	Asp
385					390					395					400
Ser	Asp	Glu	Tyr	Asp	Phe	Ile	Ala	Pro	Ala	Asn	Tyr	Ile	Leu	Lys	Asn
				405				410						415	
Ile	Tyr	Lys	Lys	Asn	Asp	Thr	Asn	Gly	Lys	Lys	Glu	Leu	Leu	His	Phe
			420					425					430		
Lys	Asp	Ile	Asn	Asn	Asn	Leu	Lys	Leu	Glu	Leu	Ile	Asn	Tyr	Cys	Asn
			435				440					445			
Leu	Leu	Lys	Asp	Asn	Asp	Val	Ser	Gly	Ile	Leu	Thr	Tyr	Glu	Lys	Leu
			450			455					460				
Gly	Asn	Val	Gln	Asp	Ile	Phe	Asn	Asn	Leu	Thr	Lys	Leu	Leu	Glu	Glu
465					470					475					480
His	Lys	Glu	Glu	Asn	Asn	Tyr	Val	Leu	Tyr	His	Lys	Met	Lys	Asn	Glu
				485					490					495	
Val	Leu	Cys	Leu	Lys	Asn	Ala	Asn	Asp	Trp	Met	Lys	Asn	Lys	Thr	Gly
			500					505					510		
Leu	Val	Leu	Pro	Gln	Leu	Lys	Tyr	Ser	Leu	Asn	Lys	Phe	Asn	Lys	Asn
			515				520					525			
Lys	Glu	Asn	Tyr	Ile	Lys	Glu	Asn	Ile	Phe	Glu	Glu	Asp	Glu	Asn	Gly
			530			535					540				
Ile	Val	Asp	Leu	Thr	Lys	Phe	Pro	Val	Asp	Thr	Ser	Tyr	Ser	Ser	Tyr
545					550					555					560
Asn	Tyr	Ala	Asp	Ser	Leu	Tyr	Cys	Asn	Arg	Glu	Tyr	Cys	Asn	Arg	Leu
				565					570					575	

Lys Asp His Asn Asn Cys Ile Ser Lys Ile Asn Val Glu Asp Gln Lys  
 580 585 590  
 Asn Cys Ala Leu Ser Trp Ala Phe Ala Ser Ile Tyr His Leu Glu Thr  
 595 600 605  
 Ile Lys Cys Met Lys Gly Tyr Glu Pro Leu Asn Ala Ser Val Leu Tyr  
 610 615 620  
 Val Thr Asn Cys Leu Lys Asn Lys Asn Asn Asp Val Cys Thr Glu Gly  
 625 630 635 640  
 Ser Asn Pro Leu Val Phe Leu Glu Thr Ile Glu Glu Lys Gly Phe Leu  
 645 650 655  
 Pro Thr Glu Ser Asn Tyr Pro Tyr Asp Gln Ser Lys Val Gly Asp Val  
 660 665 670  
 Cys Pro Gln Val Gln Asn Asp Trp Asp Asn Val Phe Glu Asn Thr Lys  
 675 680 685  
 Val Leu Glu Tyr Asn Asn Ala Pro Phe Ser Val Gly Thr Lys Gly Tyr  
 690 695 700  
 Ile Ala Tyr Glu Ser Glu Val Phe Gln Lys Asp Ile Asp Ser Phe Val  
 705 710 715 720  
 Lys Leu Ile Lys Asp Glu Ile Met Asn Lys Gly Ser Val Ile Ala Tyr  
 725 730 735  
 Val Lys Ala Lys Asn Val Leu Gly Tyr Glu Leu Asn Gly Lys Lys Val  
 740 745 750  
 Gln Asn Leu Cys Gly Asp Lys Lys Pro Asp His Ala Val Asn Ile Val  
 755 760 765  
 Gly Tyr Gly Asn Tyr Ile Asn Asn Lys Gly Glu Lys Lys Ser Tyr Trp  
 770 775 780  
 Ile Val Arg Asn Ser Trp Gly Lys Tyr Trp Gly Asp Asp Gly Tyr Phe  
 785 790 795 800  
 Lys Val Asp Met Tyr Gly Pro Pro Thr Cys Glu Asp Asn Phe Ile His  
 805 810 815  
 Ser Val Val Val Phe Asn Val Glu Val Pro Val Asn Glu Asn Phe Asp  
 820 825 830  
 Lys Lys Glu His Asp Ile Tyr Lys Ser Tyr Leu Lys Asn Ser Pro Asp  
 835 840 845  
 Phe Tyr His Asn Ile Tyr Tyr Lys Asn Tyr Asn Phe Glu Asn Tyr Val  
 850 855 860  
 Ser Pro Ile Ser Thr Trp Ser Glu Val Leu His Asn Thr Leu Tyr Asn  
 865 870 875 880  
 Asn Asn Leu Ile Trp Gly Gln Glu Thr Thr Asp Pro Ile Gly Glu Gly  
 885 890 895  
 Lys Leu Pro Ala Ser Glu Ala Gly His Leu Arg Gly Glu Gly Lys Gly  
 900 905 910  
 Asn Ser Glu Glu Asn Gln Gly Gln Arg Ser Asn Ala Asn Gly Ala Ile  
 915 920 925  
 Ser Ser Asn Gln Ser Thr Gly Gly Lys Ile Thr Lys Gln Gly Glu Ser  
 930 935 940

Lys Asp Asp Gly Val Ala Leu Pro Val Ser Thr Asp Gly Lys Pro Asn  
 945 950 955 960  
 Thr Ser Ser Ser Val Val Asp Thr Asn Asp Gln Arg Ser Leu Pro Asn  
 965 970 975  
 Pro Arg Ala Thr Ser Leu Gln Pro Pro Ser Val Gln Ile Pro Asn His  
 980 985 990  
 Glu Gly Thr Ser Ala Pro Gly Asn Ser Arg Thr Pro Ser Ile Val Ser  
 995 1000 1005  
 Pro Thr Ala Ala Glu Lys Ser Arg Lys Ala Gln Ile Phe His Val Leu  
 1010 1015 1020  
 Lys His Ile Lys Asn Ser Arg Ile Lys Met Gly Leu Val Lys Tyr Asp  
 1025 1030 1035 1040  
 Asn Ser Asp Asn Ile Gly Gly Asp His Val Cys Ser Arg Thr Tyr Ala  
 1045 1050 1055  
 Val Asn Pro Glu Lys Gln Glu Glu Cys Val Lys Phe Cys Glu Glu Asn  
 1060 1065 1070  
 Trp Glu Asn Cys Lys Asn Lys Pro Ser Pro Gly Tyr Cys Leu Ala Lys  
 1075 1080 1085  
 Leu Lys Asn Thr Asn Glu Cys Phe Phe Cys Tyr Val  
 1090 1095 1100

<210> 71  
 <211> 1004  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 71  
 Met Met Lys Leu Asn Arg Asn Val Leu Phe Lys Lys Gly Glu Lys Ile  
 1 5 10 15  
 Thr Tyr Ser Val Lys Ser Val Ile Phe Ile Ile Asn Val Ile Arg Thr  
 20 25 30  
 Arg Gly Glu Glu Asp Asp Asp Asn Asn Asn Ile Ser Gly Lys Ser Ile  
 35 40 45  
 Leu Gly Thr Ser His Asn Asn Ile Ser Asn Ile Asp Leu Ser Ser Ile  
 50 55 60  
 Pro Asn Leu Asp Ser Asn Ile His Ala Ser Phe Ser Ser Asp Thr Lys  
 65 70 75 80  
 Glu Trp Ser Pro Asn Asn Leu Thr Ser Lys Lys Lys Lys Lys Lys  
 85 90 95  
 Glu Ile Arg Pro Lys Asp Ile Met Ser Asn Ser Asp Ser Ser Asn Thr  
 100 105 110  
 Ser Ser Ile Asn Lys Gln Asn Asn Asn Gln Ile Lys Ser Val Leu Leu  
 115 120 125  
 Lys Glu Asn Lys Gly Val Lys Ile Thr Gly Pro Cys Asn Val Asn Leu  
 130 135 140  
 Ser Ile Phe Leu Val Pro His Ile Tyr Ile Asp Val Glu Thr Lys Tyr  
 145 150 155 160  
 Asn Asn Ile Glu Leu Lys Tyr Glu Leu Asp Glu Phe Ser Asp Ser Ile  
 165 170 175

Lys Phe Lys Asp Thr Thr Thr Glu Leu Arg Thr Ser Asp Asp Thr Leu  
 180 185 190  
 Met Asn Thr Asn Phe Asn Val Gly Val Ser Arg Asp Thr Leu Asp Lys  
 195 200 205  
 Asp Arg Leu Tyr Asn Ile Cys Ala Glu Asn Lys Thr Phe Lys Phe Val  
 210 215 220  
 Val Tyr Ile Lys Asp Asn Ile Leu Thr Leu Lys Trp Lys Val Tyr Glu  
 225 230 235 240  
 Thr Gly Val Thr Asn Asn Lys Val Asp Ile Arg Gln Tyr Lys Met Lys  
 245 250 255  
 Glu Leu Thr Arg Pro Ile Thr Thr Ile Gln Ile His Ser Val Ser Glu  
 260 265 270  
 Asn Lys Asp Thr His Leu Leu Glu Ser Lys Asn Tyr Val Ile Lys Thr  
 275 280 285  
 Asp Ile Pro Glu Thr Cys Asp Val Met Ala Thr Asn Cys Phe Leu Ser  
 290 295 300  
 Gly Asn Ile Asn Ile Glu Lys Cys Leu Glu Cys Thr Leu Leu Val Gln  
 305 310 315 320  
 Asn Asn Asp Thr Ser Ser Glu Cys Phe Thr Tyr Val Ser Asn Asp Val  
 325 330 335  
 Arg Glu Asn Phe Asn Gln Ile Lys Ala Glu Ala Glu Asp Asp Glu Asn  
 340 345 350  
 Phe Arg Asn Tyr His Leu Thr Asp Thr Ile Asn Asn Ile Leu Lys Arg  
 355 360 365  
 Ile Tyr Lys Ile Asn Lys Asn Glu Gly Lys Lys Glu Leu Ile Thr Leu  
 370 375 380  
 Glu Glu Leu Asp Asn Phe Leu Lys Glu Ser Ile Thr Asp Tyr Cys Lys  
 385 390 395 400  
 Ile Leu Arg Glu Ile Asp Thr Asn Gly Thr Leu Val Asn His Glu Leu  
 405 410 415  
 Gly Asn Asn Val Asp Val Phe Asn Asn Leu Ile Arg Leu Leu Lys Leu  
 420 425 430  
 His Lys Asn Glu Ser Ile Ser Thr Leu His Asn Lys Leu Arg Asn Ser  
 435 440 445  
 Ala Ile Cys Met Lys Tyr Pro Asp Lys Trp Ile Glu Lys Lys Thr Gly  
 450 455 460  
 Leu Ile Leu Pro Asn Val Val Asn Asn Asn Ile Ile Tyr Asn Asn Lys  
 465 470 475 480  
 Tyr Glu Lys Leu Asn Glu Glu Lys Lys Arg Lys Ile Tyr Asp Asn Lys  
 485 490 495  
 Asp Asp Ser Lys Ile Ser Asp Ile Ile Asn Ile Lys Lys Tyr Ile Phe  
 500 505 510  
 Thr Asn Asn Thr Leu Lys Tyr Phe Asn Asn Asp Lys Gln Phe Cys Asn  
 515 520 525  
 Ser Ser Phe Cys Asn Arg Leu Lys Asp Glu Asn Asn Cys Ile Ser Lys  
 530 535 540  
 Ile Gln Ile Glu Asp Gln Gly Asn Cys Ala Ile Ser Trp Ile Phe Ala

545                      550                      555                      560  
 Ser Lys Tyr Tyr Leu Glu Thr Leu Lys Cys Met Lys Gly Tyr Glu Pro  
                                  565                      570                      575  
 His Ala Ile Ser Ala Leu Tyr Ile Ala Asn Cys Ser Lys Arg Lys His  
                                  580                      585                      590  
 Lys Asn Arg Cys Asn Val Gly Ser Asn Pro Leu Glu Phe Leu Gln Ile  
                                  595                      600                      605  
 Ile Glu Glu Asn Gln Phe Leu Pro Met Asp Thr Asn Tyr Leu Tyr Ser  
                                  610                      615                      620  
 Tyr Thr Lys Val Gly Asn Asp Cys Pro Asp Glu Glu Lys Asn Trp Val  
                                  625                      630                      635                      640  
 Asn Leu Leu Lys His Thr Arg Met Leu Asn Tyr Asn Asn Lys His Arg  
                                  645                      650                      655  
 Ser Thr Leu Ser Thr Lys Ala Tyr Arg Ala Tyr Glu Ser Glu His Phe  
                                  660                      665                      670  
 Lys Asp Lys Met Asp Thr Phe Ile Lys Leu Ile Lys Asp Glu Ile Met  
                                  675                      680                      685  
 Asn Asn Gly Ser Val Ile Ala Tyr Val Lys Ala Glu Asn Val Leu Gly  
                                  690                      695                      700  
 Tyr Glu Leu Asn Gly Lys Asn Val Gln Asn Leu Cys Gly Asp Lys Thr  
                                  705                      710                      715                      720  
 Pro Asp His Ala Val Asn Ile Val Gly Tyr Gly Asn Tyr Ile Asn Asp  
                                  725                      730                      735  
 Glu Asp Glu Lys Lys Ser Tyr Trp Ile Val Arg Asn Ser Trp Gly Lys  
                                  740                      745                      750  
 Tyr Trp Gly Asp Glu Gly Tyr Phe Lys Val Asp Met Tyr Gly Pro Ser  
                                  755                      760                      765  
 Thr Cys Glu Asp Asn Phe Ile His Thr Val Val Val Phe Asn Ile Asn  
                                  770                      775                      780  
 Met Pro Lys Ser Lys Lys Ser Pro Val Lys Ile Thr Phe Pro Leu Tyr  
                                  785                      790                      795                      800  
 Asn Tyr Tyr Leu Lys Tyr Ser Pro Asp Phe Tyr His Asn Leu Tyr Tyr  
                                  805                      810  
 Lys Asn Phe Asn Ser Lys Lys Ser Met Lys Leu Val Asn Ala Ser Asp  
                                  820                      825                      830  
 Glu His Lys Asn Ile Tyr Ser Gln Glu Asp Lys Val Asn His Lys Lys  
                                  835                      840                      845  
 Gly Ser Lys Ile Leu Asn Ser Glu Val Thr Thr Ser Leu Leu Ser Gln  
                                  850                      855                      860  
 Glu Ile Ser Gln Arg Arg Gly Glu Asp Asp Asp Ile Asp Thr Leu Ile  
                                  865                      870                      875                      880  
 Gly Asp Ser Pro Asp Ile Asn Glu Gln Glu Lys Asn Ile Lys Asp Glu  
                                  885                      890                      895  
 Phe Asn Lys Ser Ser Ile Thr His Asn Ser Val Ser Ser Ser Asn Ile  
                                  900                      905                      910  
 Thr Lys Ser Asn Lys Asn Thr Asn Lys Val Lys Ile Tyr His Ile Ile  
                                  915                      920                      925

Lys His Val Lys Asn Thr Lys Ile Lys Ile Gly Phe Val Lys Tyr Asp  
 930 935 940  
 Asn Tyr Asn Thr Ile Gly Thr Asn His Thr Cys Ser Arg Ser Tyr Ser  
 945 950 955 960  
 Glu Asp Gln Glu Lys His Glu Gly Cys Ile Lys Phe Cys Glu Leu His  
 965 970 975  
 Trp Asn Glu Cys Lys Asp Lys Thr Ser Pro Gly Tyr Cys Leu Thr Lys  
 980 985 990  
 Leu Lys Gly Ser Asn Glu Cys Phe Phe Cys Tyr Val  
 995 1000

<210> 72  
 <211> 1247  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 72  
 Met Cys Thr Tyr Gly Ile Tyr Ser Asp Asn Lys Phe Leu Ile Lys Ser  
 1 5 10 15  
 Asn Tyr Lys Asp Asn Phe Tyr Ile Arg Asn Lys Cys Ile Gly Ala Leu  
 20 25 30  
 Glu Leu Lys Gly Ile Tyr Asp Asn Ile Asn Tyr Arg Ser Phe Phe Cys  
 35 40 45  
 Lys Asn Lys Ser Leu Ile Ser Pro Val Tyr Leu Arg Gly Asp Ile Ile  
 50 55 60  
 Tyr Asn Asn Asp Leu Ser Lys Glu Lys Asn Asn Lys Gln Ser Tyr Tyr  
 65 70 75 80  
 His Met Asn Asn Lys Arg Ser Lys Glu Asn Ser Gly Phe Tyr Asn Ser  
 85 90 95  
 Glu Ile Asn Ala Ile Asn Asp Ile Met Ile Gly Tyr Glu Asn Glu Gly  
 100 105 110  
 Gly Lys Lys Lys Val Gln Arg Gln Lys Lys Tyr His Gln Glu Asn Asp  
 115 120 125  
 Glu Arg Asp Ala Tyr Lys Arg Asn Asn Ala Lys Tyr Glu Glu Asp Asp  
 130 135 140  
 Asn Arg Glu Gln Val Glu Lys Asn Asn Glu Gly Glu Lys Asn Asp Glu  
 145 150 155 160  
 Gly Gly Lys Lys Gly Glu Gly Glu Lys Lys Gly Glu Gly Glu Lys Lys  
 165 170 175  
 Gly Glu Gly Glu Lys Lys Asp Glu Gln Glu Glu Gln Ile Gln Leu Asp  
 180 185 190  
 Glu Asp Trp His Ser Asp Arg Gly Ala Asn Lys Asn Pro Ser Arg Asp  
 195 200 205  
 Thr Tyr Asn Lys Ile Ile Asn Asn Asn Tyr Phe Arg Leu Lys Glu Ile  
 210 215 220  
 Tyr Met Lys Glu Glu Ser Asp Leu Leu Asn Glu Asn Asn Asp Lys Asn  
 225 230 235 240  
 Lys His Gly Asp Phe Tyr Asn Ile Lys Ser Asp Asp Leu Asn Asn Ser  
 245 250 255

140



Asn Ile Gly Val Arg Gln Arg Lys Arg Lys Lys Lys Lys Lys Glu Lys  
 260 265 270  
 Ile Lys Ala Lys Arg Arg Lys Asn Lys Gly Tyr Val Tyr Glu Val Glu  
 275 280 285  
 Asp His Leu Asp Asn Ile Thr Leu Phe Asn Ile Tyr Glu Asp Asn Ile  
 290 295 300  
 Ala Leu Tyr Asn Tyr Val Phe Asn Leu Asp Val Lys Asn Phe Leu Tyr  
 305 310 315 320  
 Lys Lys Gly Leu Leu Asp Asn Ser Tyr Lys Met Gly Asn Asn Asn Gln  
 325 330 335  
 Leu Glu Asn Lys Asn Lys Asn Asn Asn Ile Ile Met Asn Asn Leu  
 340 345 350  
 Asn Ala Pro Cys Leu Ile Asn Ser Val Ser Ser Glu Arg Ile Met Asn  
 355 360 365  
 Thr Glu Tyr Gln His Gly Thr Gln Lys Cys Ile Asp Asn Ile Lys Asn  
 370 375 380  
 Asp Ile Asn Glu Lys Arg Tyr Asn Asp His Asp Asp His Ile Ile Asn  
 385 390 395 400  
 Val Glu Gln Glu Asn Asn Ile Ser His Val Phe Asn Lys Lys Leu Phe  
 405 410 415  
 Glu Lys Asn Ile Tyr Asn Gly Ser His Pro Asn Glu Lys Arg His Ser  
 420 425 430  
 Leu Gln Asn Asp Leu Pro Glu Ser Asn Asp Lys Ile Val Lys Ser Ser  
 435 440 445  
 Ser Asn Asn Asp Tyr Ser Phe Glu Ser Thr Ile Arg Asn Glu Ile Asp  
 450 455 460  
 Lys Leu Asp Asn Asp Asp Val Asp Asn Asn Asn Thr Asn Lys Trp Asn  
 465 470 475 480  
 Glu Ile Lys Lys Arg Lys Lys Lys Phe Lys Arg Glu Lys Asn Lys Ile  
 485 490 495  
 Ile Asn Asn Ser Phe Gln Asn Gln Glu Ala Glu Asp Asp Lys Asn Asn  
 500 505 510  
 Asn Asn Asn Asp Asn Asn Asn Asp Asn His Asn Asp Asn Asn Asn Glu  
 515 520 525  
 Asn Asn Asn Glu Asn Asn Asn Asp Asn Asn Asn Glu Asn Asn Asn Asp  
 530 535 540  
 Ile Asn Asn Asp Ile Asn Asn Ile His Asn Asn Asp Asn Asn Tyr Tyr  
 545 550 555 560  
 Asn Asn Asp Asn Ile Asn Leu Tyr Asn Glu Met Thr Lys Lys Lys Cys  
 565 570 575  
 Met Leu Asp Asn Ser Tyr Thr Lys Tyr Phe Phe Tyr Ile Phe Thr Leu  
 580 585 590  
 Asp Met Leu Pro Ser Ile Lys Phe Glu Thr Phe Tyr Glu Lys Asn Thr  
 595 600 605  
 Asp His Lys Asn Phe Asn Glu Asn Tyr Lys Phe Tyr Tyr Asn Thr Asp  
 610 615 620

Asp Asp Thr Asp Ile Ile Asn Ala Ile Lys Lys Lys Asn Val Lys Asn  
 625 630 635 640  
 Lys Lys Lys Asn Gly Asn Ile Val Ile Lys Asn Tyr Ile Asn His Asn  
 645 650 655  
 Glu Tyr Ser Tyr Leu Glu Tyr Asn Glu Asn Lys Asn Tyr Glu Ile Asn  
 660 665 670  
 Lys Lys Glu Lys Leu Leu Thr Glu Asn Tyr Glu Tyr Asp Met Tyr Ile  
 675 680 685  
 Lys Asp Asn Ile His Tyr Asn Asp Tyr Ser Glu Gly Asp Gly Lys Gln  
 690 695 700  
 Thr Lys Lys Ala Ser Ser Phe Leu Tyr Asn Asn Asn Asn Asn Asn Lys  
 705 710 715 720  
 Tyr Lys Lys Glu Asp Asn Lys Thr Gln Ile Ile Ser Tyr Met Asp His  
 725 730 735  
 Val Asp Asn Glu Asn Gly Val Lys Gly Leu Lys Lys Arg Asn Leu Phe  
 740 745 750  
 Tyr Asn Asn Ser Asp Gln Leu Tyr Asn Phe Asp Val Lys Asp Asn Asp  
 755 760 765  
 Met Ile Lys Tyr Glu Lys Arg Gln Ser Lys Asn Phe Val Glu Glu Glu  
 770 775 780  
 Phe Ile Asn Gly Asn Arg Lys Met Glu Asn Glu Asp Lys His Leu Lys  
 785 790 795 800  
 Lys His Tyr Asp Glu Asn Asp Ile Lys Lys Lys Lys Arg Lys Lys Glu  
 805 810 815  
 Lys Glu Glu Lys Gln Gln Lys Ser Lys Ser Lys Asn Thr Tyr Leu Asn  
 820 825 830  
 Asn Leu Ser Arg Ser Tyr Ile Tyr Leu Ile Lys Arg Ile Asn Leu Phe  
 835 840 845  
 Ser Glu Asn Asn Asn Glu Val Asp Ile Ile Tyr Glu Lys Ile Asn Lys  
 850 855 860  
 Ala Phe Ile Asp Leu Tyr Asn Ile Phe Ile Phe Tyr Ile Phe Ile His  
 865 870 875 880  
 Asn Leu Phe Pro Cys Cys Ile Cys Ser Ile Arg Leu His Phe Ser Phe  
 885 890 895  
 Ile Ser Phe Asp Ile Leu Glu Ile Met Leu Thr Gly His Leu Ile Lys  
 900 905 910  
 Val Lys Asn Asn Asn Ala Ile Asn Leu Glu Leu Gln Asn Met Asn Lys  
 915 920 925  
 Ser Val Gln Glu Asn Leu Leu Lys His Phe Phe Lys His Leu Glu Asn  
 930 935 940  
 Tyr Tyr Ile Glu Lys Ser Glu Leu Phe Asn Tyr Thr Asn Met Phe Ser  
 945 950 955 960  
 Asn Asn Ile Asp Lys Val Ile Leu Lys Arg Lys Thr Lys Ser Asp Ile  
 965 970 975  
 Ser Gln Phe Gly Tyr Met Thr Lys Arg Arg Thr Ser Met Met Lys Ser  
 980 985 990  
 Gln Arg Asn Ile Trp Thr Phe Leu Phe Thr Lys Ile Phe His Ser Pro

995 1000 1005  
 Leu Phe Asn Phe Thr Ser Lys Ile Lys Asn Leu Phe Leu Lys Lys Asn  
 1010 1015 1020  
 Lys Asn Lys Asn Lys Ile Lys Asn Lys Asn Lys Asn Lys Asn Lys Asn  
 1025 1030 1035 1040  
 Lys Lys Thr Gln Ile Gln Ile Gln Ile Gln Ile Gln Lys Glu Leu Glu  
 1045 1050 1055  
 Lys Glu Lys Glu Lys Glu Lys Glu Lys Tyr Lys Gln Lys Lys Asn Asn  
 1060 1065 1070  
 Asn Asn Asn Asn Asn Ile Lys Ser Pro Ile His Lys Asn Ile Asp Ser  
 1075 1080 1085  
 Lys Glu Ile Glu Lys Gln Asn Lys Lys Lys Asn Lys Leu Gln Leu Leu  
 1090 1095 1100  
 Leu Lys Lys Thr Asp Lys Lys Asn Val Asn Pro Ser Gln Ile Asn Asn  
 1105 1110 1115 1120  
 Asn Ile Asn Asp Ser Ile Phe Leu Phe Asp Gln Leu Lys Asn Tyr Ile  
 1125 1130 1135  
 Ile Leu Glu Asn Arg Lys Ile Phe Phe Glu Asn His Met Glu Asn Glu  
 1140 1145 1150  
 Phe Ser Ser Ile Ile Ile Thr Pro Leu Asn Val Leu Pro His Val Ile  
 1155 1160 1165  
 Ile Lys Lys Tyr Phe Gly Val Ile Ser Leu His Ile Val Lys Glu Asn  
 1170 1175 1180  
 Ile Asn Leu Lys Lys Phe Asp Phe Phe Tyr Gln Ser Leu Ile Ser Asp  
 1185 1190 1195 1200  
 Ile Leu Phe Ile Ala Lys Ser His Ile Lys Asn Ile Gly Ala Asn Leu  
 1205 1210 1215  
 Ile Ser Ser Phe Lys Ile Thr Asn Leu Phe Leu Arg Glu Glu Lys Ser  
 1220 1225 1230  
 His Gly Tyr Ala Leu Ile Ser Ile Cys Gly Asp Val Ala Lys Phe  
 1235 1240 1245

<210> 73  
 <211> 300  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 73  
 Met Ser Asn Ala Glu Glu Glu Thr Val Lys Lys Lys Lys Lys Tyr Arg  
 1 5 10 15  
 Lys Asp Lys Pro Trp Asp Asn Glu Asn Ile Asp His Trp Lys Val Glu  
 20 25 30  
 Lys Phe Thr Gln Glu Asp Asn Lys His His Phe Leu Glu Glu Ser Ser  
 35 40 45  
 Phe Lys Val Leu Phe Pro Lys Tyr Arg Glu Lys Tyr Leu Gln Gln Phe  
 50 55 60  
 Ser Ser Asp Ile Lys Asn Val Leu Asn Lys His Phe Ile Lys Phe Glu  
 65 70 75 80  
 Ile Asp Leu Ile Glu Gly Tyr Met Cys Val Lys Thr Thr Lys Lys Thr

85

90

95

Phe Asp Pro Tyr Ile Ile Ile Lys Ser Arg Asp Met Ile Ser Leu Leu  
 100 105 110  
 Ser Arg Ser Val Pro Phe Val His Ala Lys Arg Val Leu Glu Asp Glu  
 115 120 125  
 Thr Tyr Cys Asp Ile Ile Lys Ile Ser Gly Tyr Val Arg Asn Lys Asn  
 130 135 140  
 Lys Phe Ile Lys Arg Arg Gln Arg Leu Leu Gly Ser Asn Ala Thr Thr  
 145 150 155 160  
 Leu Lys Ala Leu Glu Ile Leu Thr Asn Cys Tyr Ile Cys Ile His Gly  
 165 170 175  
 Lys Thr Val Ser Val Ile Gly His Phe Lys Ser Leu Lys Val Val Arg  
 180 185 190  
 Arg Ile Ile Ile Asp Cys Met Lys Asn Ile His Pro Val Tyr His Ile  
 195 200 205  
 Lys Glu Leu Ile Ala Lys Arg Glu Leu Glu Lys Asn Glu Glu Phe Lys  
 210 215 220  
 Asn Glu Asn Trp Glu Lys Phe Leu Pro Asn Phe Lys Lys Arg Asn Val  
 225 230 235 240  
 Gln Arg Lys Lys Ile Lys Glu Lys Leu Asp Lys Lys Lys Lys Lys Asn  
 245 250 255  
 Lys Ser Val Phe Pro Pro Asp Gln Leu Pro Arg Lys Ile Asp Ile Gln  
 260 265 270  
 Met Glu Thr Gly Glu Tyr Phe Leu Asn Asn Gln Lys Asn Lys Lys Lys  
 275 280 285  
 Asp Lys Thr Gln Asp Lys Gln Gln Lys Gly Asn Asp  
 290 295 300

&lt;210&gt; 74

&lt;211&gt; 1802

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 74

Met His Phe Tyr Lys Arg Ile Lys His Tyr Arg Asn Ile Leu Ile Lys  
 1 5 10 15  
 Cys Asn Ile Ser Asn His Asn Ile Ile Tyr Gly Gly Tyr Asp Thr Cys  
 20 25 30  
 Pro Leu Lys Glu Ile Tyr Thr Asn Tyr His Val Tyr Lys Ser Tyr Ile  
 35 40 45  
 His Thr Lys Glu Asn Ile Ile Lys Val Glu Ala Lys Glu Asn Val Asp  
 50 55 60  
 Ile Asp Asn Ile Asn Asn Lys Asp Asp Ile Phe Tyr Asn Asn Asp His  
 65 70 75 80  
 Lys Ile Asp Asp Asp Lys Ile Lys Lys Ile Gln Cys Gln Lys Asn Cys  
 85 90 95  
 Thr Ile Tyr His Asp Ile Glu Lys Asn Ser Tyr Val Asp Ile Asp Asp  
 100 105 110  
 Phe Val Asn Ile Asn Asp Ala Lys Asn Lys Ile Glu Asn Leu Leu Leu

144

115					120					125					
Tyr	Ser	Lys	Lys	Leu	Tyr	Asn	Lys	Lys	Tyr	Cys	His	Asn	Lys	Leu	Leu
130					135					140					
Asn	Asn	Lys	Gln	Ile	Thr	Leu	Asn	Asn	Ile	Val	Leu	Asn	Ile	Leu	Ser
145					150					155					160
Ile	Ile	Asn	Gly	Lys	Asn	Asn	Asn	Asn	Asn	Ile	Lys	Asp	Ile	Tyr	Ile
				165					170					175	
Asp	Lys	Val	Leu	Leu	Leu	Asp	Phe	Tyr	Thr	Leu	Leu	Ile	Lys	Arg	Lys
			180					185					190		
Tyr	Tyr	Ile	His	Asn	Leu	Arg	Asn	Asn	Ile	Tyr	Asp	Asn	Ser	Phe	Met
		195					200					205			
Asn	Ile	Phe	Asp	Tyr	Ile	His	Tyr	Asn	Ile	Asn	Leu	His	Leu	Lys	Asn
	210					215					220				
Tyr	Asn	Leu	Lys	Asn	Thr	His	Gln	Val	Leu	His	Asn	Ile	Ser	Ile	Tyr
225					230					235					240
Ile	His	Lys	Asn	Lys	Cys	Asn	Asn	Ile	Thr	His	Glu	Leu	Val	Thr	Asn
				245					250					255	
Ile	Phe	Phe	Phe	Ser	Phe	Phe	Lys	Asn	Phe	Asn	Lys	Phe	Tyr	Thr	Lys
			260					265					270		
Lys	Glu	Gly	Lys	Asp	Lys	Asn	Glu	Ser	His	Glu	Asn	Phe	Pro	Asn	Tyr
		275					280					285			
Val	Asn	Gln	Lys	Asn	His	Asn	Asp	Leu	Asn	Ile	Lys	Ile	Thr	Asn	Asn
	290					295					300				
Phe	His	Cys	Thr	Met	Tyr	Gln	Thr	Asn	Tyr	Tyr	Lys	Tyr	Lys	Ser	Phe
305					310					315					320
Asp	Glu	Glu	Thr	Phe	Lys	Tyr	Leu	Asn	Thr	Tyr	Val	Val	Phe	Leu	Ser
				325					330					335	
Asn	His	Pro	Ser	Phe	Ile	Asn	Asp	Lys	Leu	Leu	Tyr	Asn	Ile	Ser	Leu
			340					345					350		
Leu	Thr	Asn	Lys	Ile	Leu	Gln	Leu	Lys	Ile	Asn	Phe	Asn	Leu	Ala	Leu
		355					360					365			
Ser	Phe	Leu	Ser	Ala	Ser	Leu	Asn	Ile	Phe	Asp	Lys	Arg	Glu	Lys	Lys
		370				375					380				
Ile	Lys	Glu	Gly	His	Leu	Ile	Leu	Asn	Ile	Tyr	Lys	Lys	Lys	Thr	Asn
385					390					395					400
Tyr	Asp	Ile	Leu	Tyr	Ser	Leu	Ile	Lys	Gln	His	Asn	Glu	Met	Phe	Asn
				405					410					415	
Lys	Asn	Ile	Asp	His	Lys	Val	Glu	Gly	Glu	Gln	Lys	Val	Ile	Gln	Gln
			420					425					430		
Asp	Val	Ala	Met	Asp	Gly	Ile	Ile	Ser	Met	His	Val	Ser	Gly	Ala	Asn
			435				440					445			
Gln	Asn	Val	His	Asn	Ile	Ile	Arg	Thr	Asn	His	Asn	Ile	Asp	Lys	Ile
	450					455					460				
Ser	Glu	Thr	Asn	Gln	Asn	Val	His	Asn	Ala	Ile	Arg	Thr	Asn	His	Asn
465					470					475					480
Ile	Asp	Lys	Ile	Ser	Glu	Thr	Asn	Gln	Asn	Val	His	Asn	Ile	Ile	Arg
				485					490					495	

Thr Asn His Asn Ile Asp Lys Ile Ser Glu Thr Asn Gln Asn Val His  
 500 505 510  
 Asn Ile Ile Arg Thr Asn His Asn Ile Asp Lys Ile Ser Glu Thr Asn  
 515 520 525  
 Gln Asn Val His Asn Ile Ile Arg Thr Asn His Asn Ile Asp Lys Ile  
 530 535 540  
 Ser Glu Thr Asn Gln Asn Val His Asn Ile Ile Arg Thr Asn His Asn  
 545 550 555 560  
 Ile Asp Lys Ile Ser Glu Thr Asn Gln Asn Val His Asn Ile Ile Arg  
 565 570 575  
 Thr Asn His Asn Ile Asp Lys Ile Ser Glu Thr Asn Gln Asn Val His  
 580 585 590  
 Asn Ala Ile Arg Thr Asn Asp Asn Ile His Asn Ile Ile Arg Thr Asn  
 595 600 605  
 Gln His Ile His Asn Val Ser Lys Pro Lys Leu Asp Ile Leu Ser Glu  
 610 615 620  
 Glu Lys Lys Lys Asp Met Ala His Thr Ile His Val Ser Asn Asn Ile  
 625 630 635 640  
 His Ile Lys Asn Arg Tyr Thr His Asn Phe Val Pro Ser Lys Asn Asp  
 645 650 655  
 Cys Ile Asn Leu Trp Asn Tyr Ser His Ile Ile Asn Ile Ile Lys Ile  
 660 665 670  
 Leu Asp Ile Asn Lys Leu Leu Ser Lys Asn Tyr Asn Ile Asn Thr Glu  
 675 680 685  
 Glu Cys Val Lys Thr Phe Leu Lys Tyr Met Phe Asp Tyr Leu Ser Ile  
 690 695 700  
 Tyr Tyr Asp Glu Leu Val Ile Ile Thr Gln Asn Glu Leu Asn Ser Phe  
 705 710 715 720  
 Val Ser Ile Tyr Val Asn Leu Ser Ile Leu Leu Asp Gln Leu Arg Asn  
 725 730 735  
 Tyr Glu Glu Ile Cys Ser Leu Ile Ile Phe Phe Leu Ile Asn Ser Tyr  
 740 745 750  
 Lys Arg Ile Tyr Val Tyr Phe Asn Gly Leu Asn Ile Asn Met Met Ile  
 755 760 765  
 Asn Leu Ile Lys Gly Ile Tyr His Gln Ile Tyr Ile Tyr Ser Lys Ile  
 770 775 780  
 Phe Glu Asp Asn Asn Leu Phe Phe Asp Lys Phe Lys Lys Glu Leu Ile  
 785 790 795 800  
 Thr Leu Tyr Asn Asn Ile Lys Thr Asp His Met Ile Ser Ser Asn Tyr  
 805 810 815  
 Asn Asn Met Tyr Glu Leu Ile Asn Thr Asn Met Ile Phe Leu Ser Ser  
 820 825 830  
 Asn Ile Cys Asn Thr Ile Phe Asp Asn Pro Phe Lys Lys Asp Thr Tyr  
 835 840 845  
 Ile Pro Leu Asn Lys Leu Ile Thr Ile Ile His Tyr Leu Asp Lys Ile  
 850 855 860

Asn Lys Ile Cys Leu Ser Tyr Asp His Thr Ile Asn Ile Phe Leu Gln  
 865 870 875 880  
 Gln Asp Ile Leu Lys Cys Leu Lys Phe Cys Glu Lys Met Phe Leu Ser  
 885 890 895  
 Thr Asn His Asn Phe Tyr Asp Glu Asn Leu Ser Asn His His Ile Leu  
 900 905 910  
 Ile Leu Ile Asn Ile Tyr Ile Tyr Tyr Tyr Gln Lys Phe Leu His Ser  
 915 920 925  
 Pro Phe Leu Tyr Lys Cys Leu Gln Tyr Leu Ser Lys Lys Asn Asp Leu  
 930 935 940  
 Thr Leu Phe Ile Asn Glu Thr Glu Ile Ile Met Tyr Leu Asn Ile Val  
 945 950 955 960  
 Lys Lys Leu Lys Glu Arg Lys Ile Asn Asn Ile Asn Glu Lys Phe Lys  
 965 970 975  
 Asn Ile Pro Asn His Leu Lys Gln Ile Lys Glu Ile Lys Gln Val Lys  
 980 985 990  
 Glu Asp Ile Leu Glu Asp Gly Asn Thr Lys Asn Ile Tyr Gln Met Ile  
 995 1000 1005  
 His Asn Tyr Gln Thr Asn Ile Thr Tyr Gln Thr Lys Asn Gln Ala Val  
 1010 1015 1020  
 Thr Pro Ser Cys Cys Tyr His Asn Thr Ser His Ile Ile Leu Asn Thr  
 1025 1030 1035 1040  
 His Glu Asn Ile Tyr Glu Glu Lys Lys Lys Asn Asn Val Leu Leu Asn  
 1045 1050 1055  
 Asp Asp Leu Tyr Asp Glu Ile Leu Glu Arg Tyr Met Asn Lys Ile Met  
 1060 1065 1070  
 Asp Asn Leu Phe Phe Ser Ser Phe Gln Lys Val Gly Lys Lys Lys Tyr  
 1075 1080 1085  
 Thr His Trp Asn Leu Ser Ser Ser Leu Ile Gln Tyr Asn Lys Ile Leu  
 1090 1095 1100  
 Glu Glu Asn Lys Lys Asp Lys Thr Ile Asn Asn Glu Asn Asp Ile Ile  
 1105 1110 1115 1120  
 Lys Ile Asp Asn Asn Lys Asn Glu Gln Ser Ile Asn Val Asp Asn Met  
 1125 1130 1135  
 Tyr Thr Ser Ser Lys Cys Thr Lys Phe Pro Phe Asn Ile His Asp Phe  
 1140 1145 1150  
 Lys Lys Tyr Ser Ile Asn Ile Tyr Phe Leu Val Tyr Asp Asn Ile Leu  
 1155 1160 1165  
 Ser Tyr Asn Lys Lys Ile Asn Lys Glu Glu Ile Glu Lys Ile Trp Asn  
 1170 1175 1180  
 Ile Leu Asp Asn Met Ile Lys Tyr Lys Gln Asn Val Leu Thr Glu Asp  
 1185 1190 1195 1200  
 Asn Phe Tyr Tyr Ile Ile Ser Ala Leu Leu Lys Ala Gln Asn Phe Glu  
 1205 1210 1215  
 His Glu Val Tyr Lys Met Tyr Tyr Glu Tyr Met Lys Lys Cys Gly Ser  
 1220 1225 1230  
 Cys Ile Asn Ile Lys Tyr Val Phe Phe Ile Met Lys Arg Ile Phe Glu

1235				1240				1245			
Asp Thr Pro Tyr Ile Thr Tyr Lys Gln Asp Thr Ser Leu Asp Ile Asp	1250			1255				1260			
Lys Glu Asn Ile Leu Asn Asn Ser Ile Lys Lys Tyr Asn Ile Gly Ser	1265			1270				1275			1280
Thr Tyr Tyr Tyr Asn Met Lys Cys Asp Lys Tyr Gly Lys Cys Asn Lys			1285				1290				1295
Tyr Asp Asn Tyr Asp Lys Tyr Asn Ile Leu Asn Asp Ile Ile Lys Leu		1300				1305				1310	
Ser Glu Gln Ile Ile Leu Ser His Ile His Tyr Ile Lys Asn Phe Thr		1315			1320					1325	
Phe Phe Lys Glu Val Leu His Thr Tyr Met Lys Lys Asp Ile Tyr Ile		1330			1335			1340			
Lys Cys Tyr Leu Phe Tyr Tyr Pro His Phe His Asn Phe Val Leu Thr		1345			1350			1355			1360
Tyr Phe His Lys Phe Leu Thr His Asp Gln Phe Asn Lys Asn Val Leu				1365			1370				1375
Val Leu Leu Ile Asn Asn Ile Ala Ser Phe Tyr Tyr Thr Leu His Asn			1380			1385					1390
Asn Thr Tyr Thr Ser Ser Tyr Ile Ile Arg Lys Lys Asp Thr Gln Arg		1395			1400					1405	
Glu Tyr Glu Lys Ile Ile Lys Glu Lys Lys Ile Ile Glu His Asn Asn		1410			1415				1420		
Gln Lys Asn Lys Glu Lys Leu Ile Asn His Tyr Glu Asp Ile Asn Ile		1425			1430			1435			1440
Leu Asp Glu Glu Asn Phe Lys Gly Asp His Lys Asp Ile Lys Val Leu			1445			1450					1455
Lys Lys Tyr Lys Asn Gly Tyr Tyr Tyr Ser Lys Ile Phe Ser Leu Tyr		1460				1465				1470	
Pro Leu Asp Gln Ile His Leu Asn Ile Glu Leu Lys Lys Glu Glu Met		1475			1480				1485		
Val Ala Lys Asp Lys Thr Asn Gln Gly Asn Ile Gly Ser Asn Leu Leu		1490			1495				1500		
Leu Thr Gly Ala Ser Lys Asp Ile Thr Ser Tyr Asn Tyr Tyr Ile Asp		1505			1510			1515			1520
Thr Tyr Ile Lys Met Glu Leu Leu Lys Lys Leu Asn Ile Leu Leu Pro			1525				1530				1535
Thr Leu Tyr Ile Lys Glu Ile Lys Asn Lys Ser Pro His Glu Ile Lys			1540			1545				1550	
Leu Ser Ser Met Asn Ile Ile Asp Ile Phe Val Ser Leu Lys Asn Val		1555			1560				1565		
Lys Ile Arg Asn Glu Asp Ile Met Tyr Lys Leu Ser Gln Lys Tyr Ile		1570			1575			1580			
Met Asp Ile Phe Phe His Asn Asn Lys Val Lys Leu Glu Tyr Gln Ile		1585			1590			1595			1600
Lys Phe Leu Asn Ser Leu Thr Phe Leu Asp Tyr Ile Lys Glu Ala Asp			1605			1610				1615	



Leu Leu Phe Lys Thr Phe Phe Phe Lys Lys Asn Lys Ile Asn Lys Ile  
 1620 1625 1630  
 Gln Lys Glu Glu Lys Lys Lys Gln Asn Asn Tyr Asn Leu Leu Tyr Thr  
 1635 1640 1645  
 His Phe Leu Lys Ile Pro Ile His Asn Cys Ile Tyr Ile Pro Asn Ile  
 1650 1655 1660  
 Ser Ser Tyr Ile Leu Asn Phe Ile Ser Ile Tyr Asp Tyr Phe Glu Lys  
 1665 1670 1675 1680  
 Lys Asp Gln Tyr Val Ile Tyr Lys Lys Leu Leu Tyr Phe Leu Asp Glu  
 1685 1690 1695  
 Tyr Leu Lys Ser His Asn Lys Ile Asn Ser Met Asn Ser Leu Asp Lys  
 1700 1705 1710  
 Arg Asn Ile Ile Leu Ile Ile Ile Leu Leu Tyr Ile Ser Ser Ser Pro  
 1715 1720 1725  
 Leu Asn Ile Leu Ser Ile Arg Leu Gln Thr Leu Arg Ile Phe Tyr Tyr  
 1730 1735 1740  
 Tyr Ile Ile Gln Ser Asn Tyr Phe Ser Lys His Asn Ile Thr Tyr Ser  
 1745 1750 1755 1760  
 Ser Ser Thr His Ala Asp Ile Ser Lys Phe Val Val Ser Cys Ile Arg  
 1765 1770 1775  
 Lys His Ser Pro Tyr Val His Ile Trp Asn Glu Ile Asn Val His Cys  
 1780 1785 1790  
 Phe Asp Val Asp Ile Leu Leu Tyr Gly Lys  
 1795 1800

<210> 75  
 <211> 2010  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 75  
 Met Leu Ile Lys Gln Glu Pro Lys Glu Val Glu Lys Lys Glu Glu Lys  
 1 5 10 15  
 Glu Lys Lys Gly Ala Lys Asp Lys Gly Lys Asp Leu Phe Ser Leu Asn  
 20 25 30  
 Lys Lys Arg Glu Arg Lys Lys Lys Glu Ser Gln Lys Ile Asp Arg Tyr  
 35 40 45  
 Leu Ile Asn Ser Cys Asp Ser Asn Lys Ser Asn Tyr Ser Cys Cys Tyr  
 50 55 60  
 Leu Asn Asn Glu Cys Phe Val Lys Asn Ile Ser Ile Cys Lys Lys Cys  
 65 70 75 80  
 Met Phe Ser Tyr Phe Glu Phe Lys Asn Val Thr Lys Val Ile Tyr Met  
 85 90 95  
 Arg His Gly Ala Arg Thr Pro Lys Lys Lys Ile Lys Asn Ile Trp Pro  
 100 105 110  
 Phe Lys Glu Gly Lys Gly Asp Leu Thr Phe Leu Gly Phe Gln Gln Ser  
 115 120 125  
 Ile Lys Val Gly Glu Tyr Leu Arg Lys Tyr Tyr Tyr Thr Phe Asn Lys  
 130 135 140

Leu Asn Lys Lys Tyr Asn Lys Arg Glu Arg Gly Leu Arg Ile Asn Asn  
 145 150 155 160  
 Lys Glu Lys Gly Tyr Ile Lys Lys Asn Lys Cys Asp Val Lys Lys Cys  
 165 170 175  
 Lys Thr Leu Tyr Lys Asn Lys Tyr Asn Asn Asn Asn Asn Asn Asn  
 180 185 190  
 Asn Asn Tyr Val Ile Asn Glu Lys Tyr Asn Gly Ser Asn Lys Asn Asp  
 195 200 205  
 Tyr Val Lys Asn Asn Thr Tyr Asp Asn Lys Gly Tyr Ser Tyr Leu Tyr  
 210 215 220  
 Asp Leu Ser Thr Ser Phe Asn Glu Leu Glu Asn Arg Lys Arg Lys Leu  
 225 230 235 240  
 His Lys Phe Pro Tyr Leu Arg Asp Phe Ile Tyr Tyr Glu Lys Tyr Phe  
 245 250 255  
 Leu Lys Ile Asn Lys Arg Ser Asn Lys His Gln Arg Lys Val Phe Ile  
 260 265 270  
 Lys Ile Lys Arg Arg Arg Arg Asn Asn Ile Leu Lys Ile Trp Ile His  
 275 280 285  
 Gln His Leu Ile Asn Lys Met Lys Lys Ile Lys Asn Lys Asn Met Asn  
 290 295 300  
 Asn Tyr Asn Lys Cys Tyr Ile Lys Phe Ser Ser Ile Arg Lys Arg Gly  
 305 310 315 320  
 Tyr His Lys Met Glu Asn Ile Glu Cys Asn Asn Lys Asn Asn Asp Asp  
 325 330 335  
 Asp Asn Asn Asp Asp Asn Asn Asn Asn Asn Asn Asp Asp Asn Asn Asn  
 340 345 350  
 Asn Asn Asn Asp Asp Asn Asn Asn Asp Asp Asn Asn Asn Asp Asn Asn  
 355 360 365  
 Asn Asn Asn Asp Asp Asn Asn Asn Asn Asn Asn Asp Asp Asp Asn Asn  
 370 375 380  
 Tyr Tyr Tyr Tyr Asn Tyr Asn Asn Asp Glu Thr Pro Phe Asn Asn Lys  
 385 390 395 400  
 Ser Phe Asn Tyr Ala Asp Met Leu Lys Tyr Thr Lys Tyr Tyr Tyr Lys  
 405 410 415  
 Asn Ile Leu Lys Asp Lys Lys Asn Ile Tyr Thr Asn Asn Lys Lys Lys  
 420 425 430  
 Glu Leu Phe Phe Pro Leu Met Glu His Leu Tyr Met Tyr Lys Lys Lys  
 435 440 445  
 Leu Leu Ile Asn Lys Met Lys Glu Lys Asn Ile Lys Lys Lys Lys Lys  
 450 455 460  
 Lys Tyr Asp Lys Ile Ile Lys Leu Ile Asn Lys Tyr Leu Cys Ile Lys  
 465 470 475 480  
 Thr Thr Asn Ser Glu Arg Cys Lys Leu Thr Ala Tyr Gly Ile Ile Cys  
 485 490 495  
 Gly Ile Leu Gly Ile Ser Glu Tyr Ile Tyr Phe Phe Phe Phe Ile Leu  
 500 505 510

Phe Phe Lys Ser Asn Tyr Asp Lys Thr Asn Asp Asn Asn Ile Asp Thr  
 515 520 525  
 Tyr Thr Lys Arg Lys Glu Lys Lys Lys Cys Leu Asn Lys Arg Ser Lys  
 530 535 540  
 Cys Phe Gln Asn Trp Ile Leu Asn Arg Asp Ile Thr Ser Gly Gln Tyr  
 545 550 555  
 Asn Cys Ile Asp Lys Asn Thr Ala Pro Val Lys Asn Tyr Ile Ile Gly  
 565 570 575  
 Glu Asn Leu Cys Gly Glu Asn Gly Cys Gly Lys Asn Gly Cys Gly Asp  
 580 585 590  
 Ile Leu Arg Gly Asp Ile Leu Cys Gly Asp Ile Leu Arg Gly Asp Asn  
 595 600 605  
 Asn Ser Ile Pro Leu Phe Arg Ser Asn Arg Ile Phe Cys Lys Gln Ser  
 610 615 620  
 Lys Ile Thr Phe Cys Asp Glu Leu Tyr Ile Tyr Phe Asn Lys Ile Leu  
 625 630 635  
 Lys Arg Leu Gln Ser Leu Asp Asp Met Tyr Lys Ile Asn His Glu Val  
 645 650 655  
 Lys Met Phe Gly Asn Asp Lys Asp Val Leu Asn Asn Ser Tyr Lys Lys  
 660 665 670  
 Cys Tyr Asp Lys Asn Asp Tyr Gly Ser Tyr Pro Ser Tyr Asn Lys Tyr  
 675 680 685  
 Ser Asn Asp Tyr Lys Ser His Tyr Val Ile Lys Lys Met Lys Asn Val  
 690 695 700  
 Lys Ser Val Gln Cys Ser Asn Glu Ser Ile Ile Leu Lys Glu Arg Gln  
 705 710 715  
 Glu Asn Glu Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Met Glu Asn Thr  
 725 730 735  
 Phe Ile Asn Asn Asn Asn Leu Met Tyr Asn Ile Asn Val Phe Phe Asp  
 740 745 750  
 Leu Ile Ile Asn Glu Arg Gly Asn Phe Gln Phe Phe Tyr Asn Asn Ile  
 755 760 765  
 Lys Lys Lys Arg Gln Lys Asn Glu Lys Gly Leu Glu Glu Trp Asn Val  
 770 775 780  
 Tyr Asn Ile Phe Gln Leu Tyr Met Lys Tyr Ile Leu Asn Glu Phe Ser  
 785 790 795 800  
 Lys Phe Phe Lys Leu Phe Lys Phe Leu Asn Lys Asn Val Glu Asn Ile  
 805 810 815  
 Asp Asn Thr Phe Asn Ser Ile Thr Asn Ile Tyr Asn Lys Tyr Tyr Ile  
 820 825 830  
 Asn Met Val Val His Arg Lys Asp Cys Phe Glu Lys Lys Gln Ile His  
 835 840 845  
 Ser Lys Glu His Met Met Lys Lys Ile His Leu Arg Asp Lys Phe Ile  
 850 855 860  
 Glu Tyr Glu Lys Glu Asn Glu Ile Ile Asp Asn Cys Asn Asn Ile Asn  
 865 870 875 880  
 Met Asp Asn Lys Lys Lys Glu Ile Asn Asn Asn Tyr Asn Asn Met Ile

885							890							895		
Asp	Asn	Asn	Asn	Ile	Glu	Ile	Asp	Met	Ser	Asn	Asn	Phe	Ile	Phe	Thr	
			900					905					910			
Tyr	Tyr	Tyr	Ile	Phe	Tyr	Leu	Leu	Asn	Tyr	Met	Asp	Thr	Tyr	Ile	Gln	
		915					920					925				
Phe	Leu	Phe	Tyr	Tyr	Leu	Lys	Asn	Thr	Tyr	Ile	Leu	Phe	Ser	Val	Val	
	930					935					940					
Lys	Val	Ala	Glu	Arg	Asn	Ser	Leu	Met	Leu	Lys	Thr	Leu	Lys	Thr	Lys	
945					950					955					960	
Asn	His	Tyr	Ile	Lys	Lys	Leu	Arg	Asn	His	Ile	Ile	His	Asn	Ser	Asp	
				965					970					975		
Val	Tyr	Lys	Ile	Leu	Asn	Asn	Tyr	Tyr	Lys	Asp	Glu	Ile	Phe	Ile	Val	
			980					985					990			
Tyr	Asp	Ile	Thr	Lys	Trp	Thr	Glu	Asn	Cys	Met	Asn	Thr	Thr	Asp	Ile	
		995					1000					1005				
Leu	Tyr	Asn	Asp	Val	Lys	Lys	Asn	Thr	Lys	Ile	Asp	Asp	Leu	Glu	Asn	
	1010					1015					1020					
Ile	Asp	Ile	Pro	Ile	Ile	Thr	Asn	Asp	Lys	Glu	Glu	Tyr	His	Val	Asn	
1025					1030					1035					1040	
Asn	Ser	Ile	Ile	Ser	Val	Leu	Lys	Lys	His	Asn	Ser	Ser	Val	Tyr	Lys	
				1045					1050					1055		
Leu	Lys	Lys	Lys	Leu	Lys	Asn	Ser	Ile	Ile	Leu	Lys	Asp	Leu	Lys	Lys	
			1060					1065					1070			
Leu	Asn	Cys	Asn	Phe	Ile	Asn	Lys	Asn	Tyr	Ile	His	Asn	Thr	Asn	Tyr	
	1075					1080						1085				
Asp	Lys	His	Asn	Lys	Ile	Tyr	Gln	Asp	Lys	Ile	Lys	Asn	Trp	Thr	Tyr	
	1090					1095					1100					
His	Pro	Phe	His	Asn	Lys	Lys	Lys	Asn	Val	Lys	Ile	Ile	Lys	Lys	Phe	
1105					1110					1115					1120	
Ile	Ser	Ala	Tyr	Asp	Ala	Tyr	Ile	Tyr	His	Gly	Val	Asn	Leu	Asn	Leu	
				1125					1130					1135		
Asn	Phe	Asn	Arg	Ala	Tyr	Glu	Lys	Leu	Ser	Gln	His	Pro	Pro	Ser	Ser	
			1140					1145					1150			
Ile	Asp	Leu	Ile	Lys	Lys	Glu	Tyr	Gly	Gln	Asn	Asn	Tyr	Ile	Ile	Asn	
	1155						1160					1165				
Gly	Glu	Ile	Lys	Lys	Tyr	Glu	Glu	Gln	Asn	Asn	Phe	Ile	Ile	Lys	Arg	
	1170					1175					1180					
Pro	Asn	Ile	Asn	Ile	Ser	Gly	Lys	Asn	Leu	Ser	Cys	His	Asn	Lys	Thr	
1185					1190					1195					1200	
Asn	Ser	Ser	Asn	Thr	Leu	Gln	Gly	Asn	Asp	Arg	Glu	Ala	Asn	Ile	Leu	
				1205					1210					1215		
Asp	Ala	Asp	Glu	Arg	Asp	Arg	Leu	Lys	Arg	Asn	Lys	Asn	Ile	Gln	Asn	
</																

Lys Tyr Asp Gln Lys Asn Asp Gln Thr Asn Glu Gln Lys Cys Ala Gln  
 1265 1270 1275 1280  
 Lys Asn Asp Gln Thr Asn Glu Gln Lys Asn Asp Gln Thr Asn Asp Gln  
 1285 1290 1295  
 Thr Asn Asp Gln Thr Asn Asp Gln Thr Asn Asp Gln Thr Asn Asp Gln  
 1300 1305 1310  
 Thr Asn Asp Lys Ile Lys Arg Phe Tyr Lys Asn Ile Tyr Thr Cys Tyr  
 1315 1320 1325  
 Lys Leu Met Cys Lys Asn Glu Tyr Ser Asn Lys Tyr Leu Ser Trp Leu  
 1330 1335 1340  
 Cys Ser Gly Met Ser Leu Ile Asp Val Val Ile Asn Phe Ile Ile Asn  
 1345 1350 1355 1360  
 Val Arg Leu Tyr Glu Lys Tyr Asn Lys Glu Asn Lys Thr Thr Lys Cys  
 1365 1370 1375  
 Phe Ile Pro Arg Ile Ile Leu Tyr Leu Thr His Gln Ser Ser Ile Leu  
 1380 1385 1390  
 Ser Phe Gln Ser Cys Val Gly Ile Arg Lys Lys Asp Met Lys Ile Pro  
 1395 1400 1405  
 Pro Phe Ala Ser Phe Ile Ser Leu Glu Leu Ile His Ile Lys Lys Lys  
 1410 1415 1420  
 Lys Ile Lys Asn Leu Ser Asn Lys Leu Cys Asn Val Ser Asn Asn Glu  
 1425 1430 1435 1440  
 Lys Ser Tyr Cys Tyr Ser Asn Lys Tyr Asn Ile Met Lys Gly Glu Lys  
 1445 1450 1455  
 Lys Lys His Ala Ser Ser Arg Ser Val His Val Asn Gln Thr Asp Arg  
 1460 1465 1470  
 Thr Asp Val Leu Ser Phe Ile Tyr His Asn Asn Thr Ala Asn Ile Phe  
 1475 1480 1485  
 Cys Cys Lys Asp Asp Cys Val Trp Lys Val Arg Glu Thr Glu Asn Glu  
 1490 1495 1500  
 Lys Lys Phe Glu Lys Cys Arg Lys Asn Lys Lys Phe Met Asn Glu Glu  
 1505 1510 1515 1520  
 Asn Glu Asn Val Ile Lys Asp Asp Glu Lys Asn Ile Tyr Asn Ile Leu  
 1525 1530 1535  
 Lys Arg Asn Ile Asn Glu Asn Ile Asp Lys Lys Lys Ser Ile Asn Ile  
 1540 1545 1550  
 Asn Thr Cys Ile Tyr Asn Asp Ile Pro Thr Asn Val Asn Asn Lys Lys  
 1555 1560 1565  
 Tyr Glu Ser Tyr Leu Pro Lys Cys Leu Asn Lys Ile His Asp Phe Lys  
 1570 1575 1580  
 Asn Leu Phe Tyr Leu Leu Cys Tyr Lys Asn Asn Asn Ile Gln Asp Leu  
 1585 1590 1595 1600  
 Ile Gln Leu Tyr Asp Ile Cys Leu Asn Asn Asn Tyr Thr His Ile Lys  
 1605 1610 1615  
 Lys Asn Met Gln Leu Lys Glu Gly Lys Lys His Gly Lys Arg Asn Phe  
 1620 1625 1630

Tyr Gly Tyr Phe Val Lys Phe Thr Phe Asn Asn Ser Val Pro Leu Lys  
 1635 1640 1645  
 Leu Lys Lys Asn Lys Leu Ile Lys Lys Tyr Asn Met Gly Asn Lys Lys  
 1650 1655 1660  
 Asp Lys Glu Glu Asp Asn Asn Tyr His Asn Asp Lys Asn Asn Tyr Ser  
 1665 1670 1675 1680  
 Asp Asn Ile Phe Tyr Asp Asn His Asp Thr Asn Asn Asn Asn Asn Asn  
 1685 1690 1695  
 Asn Asn Asn Asn Asn Asn Asn Ser Asn Asn Asn Asn Asn Asn Ile  
 1700 1705 1710  
 Cys Leu Lys Asn Asn Lys Asn Asn Ile Met His Glu Asp Ile Asn Ala  
 1715 1720 1725  
 Asn Lys Arg Glu Ser Leu Lys Lys Lys Lys Lys Lys Lys Lys Lys Asn  
 1730 1735 1740  
 Cys Ile Gln Lys Asn Asn Asn Ile Cys Glu Arg Lys Lys Ser Asn Ile  
 1745 1750 1755 1760  
 His Asn Asn Ser Ser Lys Tyr Ile Phe Asn Thr Val Arg Phe Phe Lys  
 1765 1770 1775  
 Met Lys Asp Ile Ala Lys Ile Asn Thr Asn Lys Lys Cys Asp Glu Asn  
 1780 1785 1790  
 Ser Ile Ser Cys Ile Asn Asn Met Arg Glu Lys Arg Asn Ile Phe Lys  
 1795 1800 1805  
 Asn Leu Asn Arg Asn Ile Leu Asn Phe Asn Asn Ser Asn Asn Asp Lys  
 1810 1815 1820  
 Tyr Met Asn Tyr Ile Tyr Asn Ser Thr Asn Val Thr Tyr Gly Lys Asn  
 1825 1830 1835 1840  
 Tyr Lys Arg Ile Asn Lys Lys Asp Val His Ile Asn Asn Ile Leu Leu  
 1845 1850 1855  
 His Thr Tyr Lys Gln His Lys Lys Lys Lys Ser Thr Ile Ile Ser Ser  
 1860 1865 1870  
 Asp Asn Asn Asn Asn Asn Asn Asn Asn Ala Glu Asp Asp Ile Ser Ser  
 1875 1880 1885  
 Arg Lys Leu Lys Phe Lys Asp Ile Lys Gly Asn Thr Lys Gln Lys Tyr  
 1890 1895 1900  
 Ile Asn Asp His Asn Asn Ile Asn Ser Tyr Asp Asn Asn Ile Asn Asn  
 1905 1910 1915 1920  
 Gly Leu Ile Asn Glu His Lys Asn Val Leu His Asn Glu Cys Lys Asn  
 1925 1930 1935  
 Lys Asn Asn Gln Ile Ile Gly Tyr Ser Ile Lys Tyr Asp Lys Asn Val  
 1940 1945 1950  
 Val Ser Glu Asn Ser Cys Ser Asp Val Ile Thr Ser Leu Lys Asp Lys  
 1955 1960 1965  
 Lys Ile Lys Lys Arg Lys Lys Lys Leu Gln Lys Lys Asn Tyr Glu Asn  
 1970 1975 1980  
 Glu Asn Ile Val Cys Leu Asp Cys Leu Ile Ser Tyr Leu Lys Lys Met  
 1985 1990 1995 2000  
 Leu Arg Ile Tyr Gly Asn Pro Glu Ile Leu

2005

2010

<210> 76  
 <211> 123  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 76  
 Met Phe Val Val Leu Ser Tyr Val Tyr Gly Val Ser Leu Gln Ile Leu  
 1 5 10 15  
 Lys Lys Lys Arg Ser Asn Gln Val Asn Phe Leu Asn Arg Lys Asn Asp  
 20 25 30  
 Tyr Asn Leu Ile Lys Asn Lys Asn Pro Ser Ser Ser Leu Lys Ser Thr  
 35 40 45  
 Phe Asp Asp Ile Lys Lys Ile Ile Ser Lys Gln Leu Ser Val Glu Glu  
 50 55 60  
 Asp Lys Ile Gln Met Asn Ser Asn Phe Thr Lys Asp Leu Gly Ala Asp  
 65 70 75 80  
 Ser Leu Asp Leu Val Glu Leu Ile Met Ala Leu Glu Glu Lys Phe Asn  
 85 90 95  
 Val Thr Ile Ser Asp Gln Asp Ala Leu Lys Ile Asn Thr Val Gln Asp  
 100 105 110  
 Ala Ile Asp Tyr Ile Glu Lys Asn Asn Lys Gln  
 115 120

<210> 77  
 <211> 498  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 77  
 Met Ile Phe Gln His Phe Leu Ser Leu His Asn Glu Lys Lys Ile Ser  
 1 5 10 15  
 Met Phe Phe Tyr Thr Phe Leu Ile Leu Tyr Ile Ser His Val Arg Ile  
 20 25 30  
 Phe Tyr Asp Cys Leu Asn Leu Lys Asn Glu Lys Asn Tyr Asn Val Leu  
 35 40 45  
 Leu Lys Asn Gly Asn Asn Asn Ser Pro Ser Tyr Tyr Phe Leu Asn Ser  
 50 55 60  
 Asn Tyr Arg Asn Asn Asn Asn Phe Leu Arg Arg Lys Glu Asn Tyr Gln  
 65 70 75 80  
 Arg Val Leu Leu Leu Tyr Asn Pro Lys Phe Asn Asp Gly Ala Lys Arg  
 85 90 95  
 Asn Ser Tyr Ile Leu Tyr Ala His Ser Lys Lys Asn Lys Asn Lys Asn  
 100 105 110  
 Lys Ile Asn His Asn Ile Asn Ile Thr Lys Arg Glu Thr Val Ser Arg  
 115 120 125  
 Arg Asp Arg Asp Asp Glu Asp Asp Asn Tyr Asp Asp Asp Asp Glu Asn  
 130 135 140  
 Tyr Asp Asp Asp Asp Asp Asn Tyr Asp Asp Asp Glu Asn Tyr Glu Asp  
 145 150 155 160

Asp Glu Asn Tyr Asp Asp Asp Asp Glu Asn Tyr Asp Asp Gly Glu Asn  
 165 170 175  
 Tyr Glu Asp Asp Glu Asn Tyr Asn Asp Asp Glu Asn Tyr Asp Asp Asp  
 180 185 190  
 Glu Asn Tyr Asp Asp Glu Tyr Asp Asp Asp Asp Tyr Pro Phe Asn Asn  
 195 200 205  
 Asp Asp Ile Asp Ile Gly Asp Lys Asp Thr Pro Tyr Glu Thr Gln Lys  
 210 215 220  
 Ser Lys Ile Arg Ser Lys Asp Glu Asn Val Ala His Gln Asn Lys Gly  
 225 230 235 240  
 Gly Asn Thr Leu Ser Leu Glu Asn Tyr Lys Ile Lys Lys Asn Ala Asn  
 245 250 255  
 Ser Asp Leu Glu Thr Asp Lys Lys Asn Lys Val Lys Lys Lys Gln Asp  
 260 265 270  
 Glu Glu Met Asp Glu Thr Asn Lys Asn Asn Lys Asn Glu Thr Asn Glu  
 275 280 285  
 Lys Asp Glu Lys Asp Glu Lys Glu Glu Lys Asp Asp Asn Ile Asn Asp  
 290 295 300  
 Asn Asn Asp Asp Ile Met Glu Asp Glu Tyr Glu Glu Asp Tyr Ile Thr  
 305 310 315 320  
 Glu Glu His Ile Lys Asp Leu His Lys Ile Cys Ser Glu Lys Met Asn  
 325 330 335  
 Lys Val Tyr Glu Phe Leu Lys Lys Glu Ser Tyr Arg Phe Asn Leu Asn  
 340 345 350  
 Asn Val Ser Asn Asp Met Phe Glu Asn Glu Lys Val Lys Ile Asn Glu  
 355 360 365  
 Arg Ile Tyr Thr Val Lys His Ile Cys His Ile Lys Lys Lys Glu Asn  
 370 375 380  
 Leu Phe Thr Ile Thr Pro Tyr Asp Pro Tyr Phe Val Asn Phe Leu Tyr  
 385 390 395 400  
 Gln His Phe Ile Lys Glu Phe Asp Glu Leu Lys Phe Tyr Val Lys Asp  
 405 410 415  
 Lys Ser Leu Tyr Ala Ile Ile Pro Pro Ile Ser Glu Asn Leu Lys Asn  
 420 425 430  
 Glu Ile Lys Met Lys Ile Lys Arg Lys Ile Glu Asp Ser Lys Val Thr  
 435 440 445  
 Leu Arg Thr Val Arg Lys Gln Met Met Asp Lys Leu Glu Lys Phe Lys  
 450 455 460  
 Asn Lys Ile Gly Lys Asp Ile Tyr Phe Lys Gln Lys Asn Tyr Ile Gln  
 465 470 475 480  
 Ser Ile His Asp Gln Thr Lys Lys Asn Ile Glu Lys Leu Phe Ala Asp  
 485 490 495

Thr Lys

<210> 78  
 <211> 235  
 <212> PRT



&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 78

Met Lys Gly Lys Gly Ser Phe Phe Phe Cys Trp Ile Phe Leu Ile Ser  
 1 5 10 15  
 Phe Leu Tyr Leu Ile Asn Val Ile Val Cys Lys Gln Thr Ile Leu Lys  
 20 25 30  
 Leu Ser Tyr Gln Ile Asn Ser Phe Asn Ser Asp Ala Lys Lys Lys Glu  
 35 40 45  
 Trp Thr Asn Ile Gly Ser Phe Ile Leu Asn Ser Ile Lys Ile Tyr Asp  
 50 55 60  
 Ile Ser Asn Thr Tyr Val Glu Glu Lys Arg Lys Phe Leu Glu Lys Met  
 65 70 75 80  
 Lys Asn Val Glu Leu His Phe Asp Tyr Val Leu Phe Gln Leu Cys Tyr  
 85 90 95  
 Asp Glu Ser Lys Cys Leu Glu Thr Tyr Val Asn Lys Glu Asn Ile Lys  
 100 105 110  
 Asn Ile Asn Asn Phe Val Phe Leu Leu Gly Leu Asp Asn Asn Tyr Thr  
 115 120 125  
 Pro Phe Ile Leu Asn Tyr Lys Ile Tyr Asn His Glu Glu Leu Tyr Asn  
 130 135 140  
 Gln Lys Ile Asn Lys Tyr Asn Asn Glu Ile Ile Tyr Ser Asn Leu Phe  
 145 150 155 160  
 Ile Ile Lys Phe Pro Thr Val Ser Thr Pro Ile Asn Ile Asn Asn Ile  
 165 170 175  
 Thr Thr Glu Asp Ile His Met Lys Pro Lys Thr Gln Lys Asn Glu Lys  
 180 185 190  
 Ile Asn Asp Gln Asn Gln Pro Lys Ser Phe Leu Arg Lys Tyr Trp Phe  
 195 200 205  
 Ile Ile Leu Ile Phe Phe Leu Ser Phe Ser Phe Ser Lys His Leu Thr  
 210 215 220  
 Glu Asn Glu Pro Gln Pro Pro Asp Asn Thr Ser  
 225 230 235

&lt;210&gt; 79

&lt;211&gt; 2496

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 79

Met Asp Lys Lys Arg Thr Phe Tyr Tyr Leu Phe Phe Phe Phe Thr Phe  
 1 5 10 15  
 Leu Val Tyr Val Leu Tyr Phe Asp Asn Ile Lys Ser Val Leu Arg Ser  
 20 25 30  
 Ser Thr Lys Lys Lys Lys Lys Lys Lys Ile Cys Lys Ser Thr Phe Tyr  
 35 40 45  
 Val His Glu Glu Ser Glu Glu Ile Lys Ser Trp Leu Arg Asn Ser Asn  
 50 55 60  
 Glu Arg Asp Lys Gly Lys Lys Phe Phe Ile Phe Glu Arg Leu Ile Lys  
 65 70 75 80

Glu Arg Lys Tyr Ile Cys Val Asn Lys Tyr Lys Arg Asn Asn Lys Leu  
 85 90 95  
 Lys Trp Ile Tyr Lys Asn Thr Tyr Glu Lys Thr Lys Asn Ile Cys Asp  
 100 105 110  
 Asp Tyr Asn Ile Leu Phe Lys Cys Ile Lys Gly Ile Ile Tyr Asp Lys  
 115 120 125  
 Asn Lys Glu Thr Phe Phe Glu Thr Phe Phe Glu Asn Phe Trp Asp Asn  
 130 135 140  
 Ile Phe Tyr Met Asn Lys Tyr Ile Phe Asn Ile Tyr Tyr Tyr Met Phe  
 145 150 155 160  
 Asp Tyr Thr Lys Lys Val Lys Lys Lys Ile Glu Gly Ile Lys Glu Asn  
 165 170 175  
 Met Asn Ile Arg His Asn Asn Asn Tyr Asn Asn Ile Phe Tyr Val His  
 180 185 190  
 Lys Phe Phe Leu Phe Asn Asp Asp Glu Glu Lys Lys Lys Arg Asn Asp  
 195 200 205  
 Asp Ile Lys Ile Asn Ile Lys Leu His Asn Asn Thr Arg Lys Leu Ser  
 210 215 220  
 Val Ser Glu Glu Asn Val Glu Leu Lys Pro Tyr Ile Lys Gln Gly Glu  
 225 230 235 240  
 Arg Asn Glu Thr Val Val Asn Leu Tyr Glu Tyr Phe Thr Gly Gly Val  
 245 250 255  
 Lys Arg Ser Asn Asn Asn Asn Glu Ile Val Val Thr Ser Thr Glu Gln  
 260 265 270  
 Phe His Arg Ile Val Ile Ile Cys Phe Lys Pro Thr Val Lys His Ser  
 275 280 285  
 His Ile Ile Thr Ser Pro His Asp Ala Leu Asn His Ile Val Glu Glu  
 290 295 300  
 Asn Asp Lys Ile Lys Leu Ser Glu Glu Ile Tyr Ser Ile Pro Phe Tyr  
 305 310 315 320  
 Pro Ile Tyr Gly Asn Leu Gly Leu Lys Asn Val Ile Thr Thr Gly Ile  
 325 330 335  
 Val Glu Phe Met Ile Pro Tyr Phe Ser Arg Thr Gln Met Asn Phe Thr  
 340 345 350  
 Val Thr Cys Ala Asn Gly Glu Met Asn Asp Leu Tyr Lys Phe Glu Asp  
 355 360 365  
 Leu Ile Lys Ile Arg Ile Arg Ile Pro Arg Asn Thr Lys Lys Ile Leu  
 370 375 380  
 Gly Leu Ser Thr Asn Glu Lys Asp Lys Thr Val Phe Glu Arg Ile Val  
 385 390 395 400  
 Asp Asn Thr Ser Asn Glu Tyr Arg Phe Lys Ser Tyr Asn Asn Lys Ile  
 405 410 415  
 Val Gly Ile Lys Leu Glu Asn Ser Ile Leu Asp Pro Pro Gly Cys Phe  
 420 425 430  
 Lys Thr Val Tyr Glu Asp Asp Lys Ile Leu Gln Leu Glu Val Phe Leu  
 435 440 445  
 Gln Tyr Val Lys Cys Ile Asn Leu Asp Arg Asp Asn Tyr Lys Ile Arg

450					455					460					
Phe 465	Phe	Phe	Leu	Pro	Glu 470	Asp	Phe	Gly	Asp	Glu 475	Glu	Ile	Glu	Phe	Ser 480
Cys	Lys	Phe	Thr	Tyr 485	Lys	Lys	Lys	Thr	Ser 490	Lys	Ile	Ile	Phe	Gly	Leu 495
Gly	Glu	Thr	Ser 500	Val	Asp	Lys	Asp	Ile 505	Phe	Tyr	Leu	Glu	Asp 510	Glu	His
Val	Lys	Leu 515	Asn	Ile	Asn	Gln	Asp 520	Ile	Ser	Gly	Asp	Glu 525	Pro	Tyr	Tyr
Ser 530	His	Leu	Asn	Tyr	Asn	Gly 535	Ile	Pro	Tyr	Asn	Ile 540	Cys	Asn	Phe	Gln
Tyr 545	Lys	Ser	Glu	Tyr	Asp 550	Ser	Gln	Val	Cys	Glu 555	Arg	Thr	Ile	His	Glu 560
Phe	Ser	Leu	Phe	Ile 565	Tyr	Asn	Cys	Asp	Thr 570	Leu	Val	Gly	Thr	Gln	Ile 575
Gln	Thr	Thr	Glu 580	Pro	Ile	Thr	Ser	Val 585	Lys	Tyr	Leu	Asn	Ser 590	Thr	Tyr
Pro	Ile	Asn 595	Lys	Phe	Ser	Asp	Ile 600	Thr	Leu	Leu	Ser	Lys 605	Asp	Ile	Asp
Ile	Glu 610	Gly	Leu	Glu	Glu	Ala 615	Phe	Arg	Asn	Ser	Lys 620	Phe	Phe	Leu	Thr
Ser 625	Tyr	Ile	Asn	His	Gly 630	Pro	Phe	Pro	Leu	Ile 635	Ile	Glu	Cys	Val	Ile 640
Ser	Asn	Ser	Asn	Lys 645	Asp	Tyr	Gln	Asn	Val 650	Tyr	Ile	Leu	Leu	His 655	Leu
Arg	Thr	Ser	Ile 660	Lys	Asn	Arg	Ser	Val 665	Ser	Phe	Cys	Asp	Phe 670	Glu	Lys
Val	Gln	Gly 675	Tyr	Asn	Tyr	Leu	Asn 680	Asn	Tyr	Ile	Asp	Gly 685	Lys	Ile	Cys
Asn 690	Ile	Asn	Ile	Thr	Ser	Asn 695	Ser	Val	Phe	Gly	Phe 700	Arg	Cys	Pro	Ser
Asn 705	Ser	Ile	Lys	Glu	Pro 710	Lys	Asp	Cys	Phe	Ser 715	Gln	Val	Tyr	Ile	Asp 720
Lys	Lys	Val	Tyr	Lys 725	Leu	Asn	Asp	Lys	Leu 730	Ser	Asn	Lys	Leu	Ile 735	Leu
Tyr	Ser	Met	Lys 740	Gln	Glu	Asn	Leu	Ala 745	Ile	Ala	Gly	Phe 750	Asn	Asn	Tyr
Ile	Ser	Asn 755	Ser	Phe	Ser	Phe	Glu 760	Cys	Tyr	Cys	Ile	Asp 765	Lys	Asn	Gln
Thr 770	Tyr	Ser	Ser	Tyr	Glu	Arg 775	Thr	Ser	Gly	Glu	Asp 780	Ile	Phe	Asn	His
Ile 785	Val	Lys	Arg	Ile	His 790	Val	His	Tyr	Lys	Asn 795	Tyr	Asp	Glu	Leu	Tyr 800
Asp	Tyr	Asn	Ile	His 805	Asp	Lys	Ile	Thr	Tyr 810	Glu	Pro	Ile	Met	Lys 815	Asn
Pro	Pro	Ile	Thr 820	Tyr	Leu	Cys	Asp	Phe 825	Leu	Asn	Lys	Lys	Gln 830	Ile	Leu

Gln Pro Leu Asn Asn Lys Thr Lys Asn Tyr Ile Cys Thr Ile Trp Tyr  
 835 840 845  
 Pro Lys Pro Leu Asn Tyr Ile Ala Leu Asn Cys Pro Thr Asn Arg Arg  
 850 855 860  
 Asp Glu Gln Asn Asp Gln Thr Ile Ser Glu Val Tyr Asn Ser Leu Gln  
 865 870 875 880  
 Lys Asp Leu Leu Lys Pro Thr Gly Ile Glu Gln Gln Ile Asp Gln Lys  
 885 890 895  
 Lys Lys Glu Leu Asn Leu Leu Phe Asn Lys Arg Asn Ile Tyr Ser Asn  
 900 905 910  
 Leu Tyr His Leu Pro Lys Asn Ala Pro Lys Arg Thr Ile Asn Lys Asn  
 915 920 925  
 Gly Leu Asn Ile Val Asn Ile Asp Glu Ile Ile Pro Gly Ile Leu Ile  
 930 935 940  
 Lys Asp Val Ile Asn Met Lys Leu Glu Asp Val Ile Lys Pro Asp Leu  
 945 950 955 960  
 Leu Thr Pro Thr Ser Phe Leu His Lys Thr Tyr Asn Thr Asn Lys Ser  
 965 970 975  
 Tyr Leu Phe Ser Thr Arg Asn Lys Ser Thr Ser Val Phe Asn Thr Pro  
 980 985 990  
 Ser Ile Tyr Thr Pro Leu Thr His Thr Ser Phe Ser Ile Ser Pro Lys  
 995 1000 1005  
 Ser Val Pro Leu Thr Lys Ser Arg Ile Glu Glu Thr His Ser Ser Ser  
 1010 1015 1020  
 Asn Thr Tyr Glu Gln Tyr Ile Gly Lys Arg Asn Ser Ile Glu Asn Gly  
 1025 1030 1035 1040  
 Phe Phe Ile Phe Gln Leu Pro Pro Tyr Leu Lys Lys Asn Gln Thr Ile  
 1045 1050 1055  
 Glu Phe Ala Cys Ile Asn Asp Ser Thr Ile Lys Asn Lys Asn Val Gly  
 1060 1065 1070  
 Asn Asn Gly Ile Met Thr Ile His Leu Lys Ser Phe Gly Asn Pro Ile  
 1075 1080 1085  
 Glu Gly Cys Tyr Phe Tyr Lys Asn Ser Ala Lys Tyr Asn Tyr Leu Lys  
 1090 1095 1100  
 Lys Ser Ile Lys Ile Asp Asp Leu Lys Lys Glu Glu Cys Thr Ile Arg  
 1105 1110 1115 1120  
 Ser Asp Gly Glu Ile Glu Phe Val Gly Ile Met Cys Pro Tyr Glu Asn  
 1125 1130 1135  
 Asn Leu Tyr Leu Thr Pro Ser Ser Cys Phe Leu Lys Thr Tyr Asp Asn  
 1140 1145 1150  
 Thr Asp Asn Leu Val Glu Leu Leu Asp Ile Asn Glu Asn Phe Glu Tyr  
 1155 1160 1165  
 Tyr Ser Asn Asp Lys Gly Ile Ser Tyr Leu Lys Ile Pro Gln Glu Phe  
 1170 1175 1180  
 Leu Asn His Val His Leu Phe Cys Tyr Cys Asn Val Asp Lys Asp Ser  
 1185 1190 1195 1200

Val Ser Asp Thr Asn Val Leu Val Lys Lys Glu Asn Lys Ile Ser Phe  
 1205 1210 1215  
 Glu Leu Asn Tyr Ser Asn Lys Gly Phe Asn Ile Ile Lys Thr Ile Asp  
 1220 1225 1230  
 Tyr Gln Tyr Glu Ala Asp Ile Leu Ile Gly Tyr Ser Tyr Tyr Phe Lys  
 1235 1240 1245  
 Arg Val Thr Pro Ile Tyr Arg Lys Lys His Ile Cys Asp Phe Thr Thr  
 1250 1255 1260  
 Glu Asp Asn Ser Leu Glu Pro Glu Ser Glu Asp Lys Met Ile Tyr Ser  
 1265 1270 1275 1280  
 Cys Tyr Leu Ser Leu Glu Asn Asn Leu Asn Phe Ile Glu Val Lys Cys  
 1285 1290 1295  
 Pro Lys Asn Lys Lys Ser Ser Asn Ser Glu Trp Leu Phe Lys Tyr Gly  
 1300 1305 1310  
 Thr Phe Asp Lys Ser Ser Glu Ile Met Glu Asp Asp Glu Asn Ile Lys  
 1315 1320 1325  
 Lys Tyr Glu His Met Lys Tyr Met Pro Glu Asp Lys Asp Glu Ile Ile  
 1330 1335 1340  
 Tyr Leu Phe Lys Lys Gln Lys Leu Glu Asp Ile Leu Pro Gly Val Ile  
 1345 1350 1355 1360  
 Ile Phe Asp Lys Asn Arg Tyr Phe Phe Glu Lys Gly Asn Phe Ser Phe  
 1365 1370 1375  
 Val Thr Pro Leu Ile Val Lys Glu Asp Val Thr Ile Lys Leu Leu Cys  
 1380 1385 1390  
 Asp Asn Ser Glu Thr Lys Ile Asp Asp Lys Ile Gly Lys Lys Gly Ile  
 1395 1400 1405  
 Ile Leu Ile Lys Ile Pro Gln His Ile Thr Asp Lys Lys Phe Tyr Gly  
 1410 1415 1420  
 Cys Asp Phe Ser Gly Asp Ser Asn Lys Lys Ser Ser Phe Tyr Tyr Thr  
 1425 1430 1435 1440  
 Ser Val Tyr Asp Leu Lys Thr Gln Asn Gln Tyr Cys Glu Val Lys Leu  
 1445 1450 1455  
 Lys Glu Asn Ile Ile Ile Ser Leu Asn Cys Pro Asn Gly Asn Ile Asn  
 1460 1465 1470  
 Pro Asn Asn Cys Phe Asn Asn Val Phe Leu Lys Thr Asn Met Asn Glu  
 1475 1480 1485  
 Gln Ile His Glu Lys Ile Gln Asn Ile Phe Asp Gln Val Lys Val Ile  
 1490 1495 1500  
 Asn Thr Lys Ser His Val Leu Leu Asn Ser Ser Ser Thr Phe Leu Ile  
 1505 1510 1515 1520  
 Ile Ser Lys Ile Thr Lys Lys Glu Leu Asn Phe Phe Cys Thr Cys His  
 1525 1530 1535  
 His Asn Glu Thr Lys Asn Val Gly Thr Ile Tyr Ile Lys Asn Glu Asp  
 1540 1545 1550  
 Ile Ile Asn Phe Ser Lys Ala Tyr Asn Lys Glu Ser Ser Ile Leu Gln  
 1555 1560 1565  
 Tyr Ile Asp Val Thr Pro Tyr Tyr Leu Lys Asp Thr Tyr Ile Cys Asp

1570	1575	1580
Phe Thr Gln Asn His Tyr Ser Ile Ser Phe Asp Thr Ser Val Asn Val 1585 1590 1595 1600		
Gln Asn Val Leu Glu Arg Tyr Leu Lys Ile Leu Ser Asp Leu Tyr Asn 1605 1610 1615		
Thr His Glu Glu Phe Thr Tyr Phe Ser Ile His Leu Lys Leu Lys Lys 1620 1625 1630		
Glu Ile Met Lys Lys Lys Tyr Ile Asp Tyr Leu Lys Lys Lys Ile Asn 1635 1640 1645		
Glu Tyr Lys Glu Lys Glu Thr Ser Asp Lys Ile Lys Arg Val Thr Leu 1650 1655 1660		
Ser Thr Asn Asp Asn Ile Asn Thr Ile Leu Val Tyr Arg Cys Asn Ile 1665 1670 1675 1680		
Asp Leu Gly Ser Phe Asp Lys Phe Lys Ile Lys Cys Pro Ser Lys Leu 1685 1690 1695		
Asn Glu Glu Glu Val Glu Asn Asn Lys Leu Tyr Pro Asn Leu Ile Tyr 1700 1705 1710		
Ser Ser Asn Leu Gly Leu Asp Glu Thr Asp Met Leu Asn Gly Leu Thr 1715 1720 1725		
Lys Leu Leu Tyr Gly Ser Val Leu Ile Asn Lys Thr Glu Lys Asn Val 1730 1735 1740		
Ser Phe Phe Glu Lys Gly Glu Leu Glu Leu Ile Ile Ser Pro Tyr Thr 1745 1750 1755 1760		
Asp Ser Ser Lys Asn Ile Ile Phe Ser Cys Glu Asn Val Pro Arg Asn 1765 1770 1775		
Leu Ser Lys Gly Ile Ile Gly Ser Ala Ser Ile Phe Ile Lys Lys Asn 1780 1785 1790		
Asp Asn Lys Ile Leu Gly Cys Asp Phe Ile Asp Thr Pro Ser Thr Leu 1795 1800 1805		
Ser Ser Ala Ser Thr Leu Glu Ser Ser Tyr Gly Ser His Ala Ser Ser 1810 1815 1820		
Pro Leu Ser Ser Ser His His Val Leu His Asn Asp Asn Gln Gly His 1825 1830 1835 1840		
Asp Val His Met Ile Asn His Ile Asp Ile Ser Asn Lys Lys Asn Ser 1845 1850 1855		
Phe Glu Phe Glu Ile Glu Leu Ile Glu Gly Lys Asn Thr Tyr Cys Asn 1860 1865 1870		
Ile Glu Ala Ile Glu Asn Asp Ile Val Gly Phe Ser Cys Pro Tyr Asn 1875 1880 1885		
Phe Leu Thr Thr Pro Ser Asp Cys Phe Glu Ser Ile Gln Ile Glu Gly 1890 1895 1900		
Val Asp Lys Glu Leu Glu Thr His Lys Leu Glu Lys Leu Leu Lys Gly 1905 1910 1915 1920		
Val Lys Ile Leu Asn Asn Asp Ile Tyr Lys Tyr Asn Phe Thr Pro Ser 1925 1930 1935		
Tyr Ile Ile Leu Pro Lys Lys Ile Lys Lys Ser Leu Lys Ile Phe Cys 1940 1945 1950		

Arg Cys Asn Ser Val Lys Leu Ile Lys Thr Gly Ile Ile Gln Ile Asn  
 1955 1960 1965  
 Ile Val Gly Asp Asp Leu Asn Asn Trp Phe Lys Lys Glu Ile Thr His  
 1970 1975 1980  
 Asn Ile Phe Ala Tyr Gln Lys Met Asp Tyr Phe Tyr Asp Phe Ser Lys  
 1985 1990 1995 2000  
 Gly Pro Thr Asn Ile Ser Ser Glu Asn Val Leu Gly Ile Ser Thr Met  
 2005 2010 2015  
 Ser Leu Met Ser Ser Asn Lys Lys Val Ser Arg Lys Lys Asn His Lys  
 2020 2025 2030  
 Glu Glu Asn Arg Thr Gln Gln Asn Val Tyr Lys Glu Ile Glu Asn Asp  
 2035 2040 2045  
 His Lys Asn Ile Asn Glu Asn Val Asn Lys Tyr Asp Asn Leu Pro Val  
 2050 2055 2060  
 Thr Leu Leu Ser Ser Asp Glu Gly Asp Gly Tyr Gln Ala Asp Glu Asp  
 2065 2070 2075 2080  
 Ile Gly Gly Glu Asp Asp Ala Glu Asp Val Asp Gly Glu Gly Asp Asp  
 2085 2090 2095  
 Glu Asp Asp Asn Ile Leu Asn Pro Leu Arg Thr Lys Gln Val Tyr Asp  
 2100 2105 2110  
 Ile Ile Val Ala Ala Ser Glu Phe Ser Lys Ile Glu Val Val Cys Pro  
 2115 2120 2125  
 Leu Arg Asn Ser Ser Gln Phe Arg Gln Ser Lys Ile Ser Pro Glu Asn  
 2130 2135 2140  
 Phe Phe Glu Tyr Val Tyr Val Leu Glu Asp Lys Asn Asp Asp Lys Arg  
 2145 2150 2155 2160  
 Lys Arg Ser Ile Glu Glu Asn Glu Lys Leu Val Lys Ala Ile Leu Glu  
 2165 2170 2175  
 Gly Lys Lys Asn Ile Asp Gly His Ile Ile Asn Ile Glu Asp Ile Asn  
 2180 2185 2190  
 Asn Lys Lys Ser Ser Lys Asn Ala Ser Val Glu Tyr Asp Asp Met Gly  
 2195 2200 2205  
 Asn Lys Ile Phe Ile Ser Ile Ile Ser Glu Lys Pro Lys Ala Val Ile  
 2210 2215 2220  
 Gly Asp Asn Ile Ser Ser Ser Arg Ser Ser Val His Ile Ser Asn Asn  
 2225 2230 2235 2240  
 Ile Met Asn Ser Ser Phe Gln Ser Asn Ile His Pro Asp Pro Ile Thr  
 2245 2250 2255  
 Ser Asp Thr Thr Thr Ser Glu Tyr Glu Gln Tyr Asn Ser Tyr Phe Lys  
 2260 2265 2270  
 Asp Ile Leu Val Ile Lys Asn Ile Asn Glu Val Ile Ser Phe Ala Asn  
 2275 2280 2285  
 Ile Lys Ile Asp Ile Asn Glu Gln Thr Tyr Ser Ser Ser Leu His Ile  
 2290 2295 2300  
 Pro Pro Leu Ile Leu Lys Asp Ala Glu Phe Leu Ile Ser Cys Asp Asn  
 2305 2310 2315 2320

Ser Leu Thr Leu Asn Glu Asn Thr Arg Gly Lys Thr Ala Thr Val Lys  
 2325 2330 2335  
 Ile Lys Val Lys Ser Asn Phe Leu Lys Ile Tyr Gly Cys Asp Phe Val  
 2340 2345 2350  
 Gly Glu Phe Ser Thr His Phe Leu Phe Ser Lys Lys Trp Asp Asp Ile  
 2355 2360 2365  
 Pro Lys Asn Tyr Ile Cys Lys Ile Asn Ile Gln Asp Asp Met Leu Ile  
 2370 2375 2380  
 Gly Leu Ala Cys Pro Ser Phe Thr Lys Leu His Pro Pro Asp Cys Phe  
 2385 2390 2395 2400  
 Glu Asn Ile Ile Val Asn Gln Asn Val Tyr Lys Lys Asn Ile Ile Met  
 2405 2410 2415  
 Glu Thr Lys Asn Met Phe Phe Tyr Lys Gln Asn Asp Lys Pro Ile Leu  
 2420 2425 2430  
 Ser Phe Val His Val Lys Lys Ile Leu Val Glu Thr Phe Leu Cys Lys  
 2435 2440 2445  
 Cys Tyr Gln Val Thr Lys Ala Asp Tyr Lys Glu Val Thr Ile Gln Ile  
 2450 2455 2460  
 Leu Tyr Glu Pro Tyr Val Met Gly Thr Pro Lys Tyr Thr Leu Glu Lys  
 2465 2470 2475 2480  
 Ser Ile Ile Gln Tyr Arg Tyr Ala Asn Leu Lys Pro Pro Leu His Ile  
 2485 2490 2495

<210> 80  
 <211> 3135  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 80  
 Met Lys Lys Ile Ile Thr Leu Lys Asn Leu Phe Leu Ile Ile Leu Val  
 1 5 10 15  
 Tyr Ile Phe Ser Glu Lys Lys Asp Leu Arg Cys Asn Val Ile Lys Gly  
 20 25 30  
 Asn Asn Ile Lys Asp Asp Glu Asp Lys Arg Phe His Leu Phe Tyr Tyr  
 35 40 45  
 Ser His Asn Leu Phe Lys Thr Pro Glu Thr Lys Glu Lys Lys Asn Lys  
 50 55 60  
 Lys Glu Cys Phe Tyr Lys Asn Gly Gly Ile Tyr Asn Leu Ser Lys Glu  
 65 70 75 80  
 Ile Arg Met Arg Lys Asp Thr Ser Val Lys Ile Lys Gln Arg Thr Cys  
 85 90 95  
 Pro Phe His Lys Glu Gly Ser Ser Phe Glu Met Gly Ser Lys Asn Ile  
 100 105 110  
 Thr Cys Phe Tyr Pro Ile Val Gly Lys Lys Glu Arg Lys Thr Leu Asp  
 115 120 125  
 Thr Ile Ile Ile Lys Lys Asn Val Thr Asn Asp His Val Val Ser Ser  
 130 135 140



Asp Met His Ser Asn Val Gln Glu Lys Asn Met Ile Leu Ile Arg Phe  
 145 150 155 160  
 Ile Asp Lys Glu Asn Lys Asn Asp Ile Gln Asn Val Glu Glu Lys Ile  
 165 170 175  
 Gln Arg Asp Thr Tyr Glu Asn Lys Asp Tyr Glu Ser Asp Asp Thr Leu  
 180 185 190  
 Ile Glu Trp Phe Asp Asp Asn Thr Asn Glu Glu Asn Phe Leu Leu Thr  
 195 200 205  
 Phe Leu Lys Arg Cys Leu Met Lys Ile Phe Ser Ser Pro Lys Arg Lys  
 210 215 220  
 Lys Thr Val Val Gln Lys Lys His Lys Ser Asn Phe Phe Ile Asn Ser  
 225 230 235 240  
 Ser Leu Lys Tyr Ile Tyr Met Tyr Leu Thr Pro Ser Asp Ser Phe Asn  
 245 250 255  
 Leu Val Arg Arg Asn Arg Asn Leu Asp Glu Glu Asp Met Ser Pro Arg  
 260 265 270  
 Asp Asn Phe Val Ile Asp Asp Glu Glu Glu Glu Glu Glu Glu Glu  
 275 280 285  
 Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu Glu  
 290 295 300  
 Tyr Asp Asp Tyr Val Tyr Glu Glu Ser Gly Asp Glu Thr Glu Glu Gln  
 305 310 315 320  
 Leu Gln Glu Glu His Gln Glu Glu Val Gly Ala Glu Ser Ser Glu Glu  
 325 330 335  
 Ser Phe Asn Asp Glu Asp Glu Asp Ser Val Glu Ala Arg Asp Gly Asp  
 340 345 350  
 Met Ile Arg Val Asp Glu Tyr Tyr Glu Asp Gln Asp Gly Asp Thr Tyr  
 355 360 365  
 Asp Ser Thr Ile Lys Asn Glu Asp Val Asp Glu Glu Val Gly Glu Glu  
 370 375 380  
 Val Gly Glu Glu Val Gly Glu Glu Val Gly Glu Glu Val Gly Glu Glu  
 385 390 395 400  
 Val Gly Glu Glu Val Gly Glu Glu Val Gly Glu Glu Val Gly Glu Glu  
 405 410 415  
 Glu Gly Glu Glu Val Gly Glu Gly Val Gly Glu Glu Val Gly Glu Glu  
 420 425 430  
 Glu Gly Glu Glu Val Gly Glu Glu Glu Gly Glu Tyr Val Asp Glu Lys  
 435 440 445  
 Glu Arg Gln Gly Glu Ile Tyr Pro Phe Gly Asp Glu Glu Glu Lys Asp  
 450 455 460  
 Glu Gly Gly Glu Ser Phe Thr Tyr Glu Lys Ser Glu Val Asp Lys Thr  
 465 470 475 480  
 Asp Leu Phe Lys Phe Ile Glu Gly Gly Glu Gly Asp Asp Val Tyr Lys  
 485 490 495  
 Val Asp Gly Ser Lys Val Leu Leu Asp Asp Asp Thr Ile Ser Arg Val  
 500 505 510  
 Ser Lys Lys His Thr Ala Arg Asp Gly Glu Tyr Gly Glu Tyr Gly Glu

515 520 525  
 Ala Val Glu Asp Gly Glu Asn Val Ile Lys Ile Ile Arg Ser Val Leu  
 530 535 540  
 Gln Ser Gly Ala Leu Pro Ser Val Gly Val Asp Glu Leu Asp Lys Ile  
 545 550 555 560  
 Asp Leu Ser Tyr Glu Thr Thr Glu Ser Gly Asp Thr Ala Val Ser Glu  
 565 570 575  
 Asp Ser Tyr Asp Lys Tyr Ala Ser Asn Asn Thr Asn Lys Glu Tyr Val  
 580 585 590  
 Cys Asp Phe Thr Asp Gln Leu Lys Pro Thr Glu Ser Gly Pro Lys Val  
 595 600 605  
 Lys Lys Cys Glu Val Lys Val Asn Glu Pro Leu Ile Lys Val Lys Ile  
 610 615 620  
 Ile Cys Pro Leu Lys Gly Ser Val Glu Lys Leu Tyr Asp Asn Ile Glu  
 625 630 635 640  
 Tyr Val Pro Lys Lys Ser Pro Tyr Val Val Leu Thr Lys Glu Glu Thr  
 645 650 655  
 Lys Leu Lys Glu Lys Leu Leu Ser Lys Leu Ile Tyr Gly Leu Leu Ile  
 660 665 670  
 Ser Pro Thr Val Asn Glu Lys Glu Asn Asn Phe Lys Glu Gly Val Ile  
 675 680 685  
 Glu Phe Thr Leu Pro Pro Val Val His Lys Ala Thr Val Phe Tyr Phe  
 690 695 700  
 Ile Cys Asp Asn Ser Lys Thr Glu Asp Asp Asn Lys Lys Gly Asn Arg  
 705 710 715 720  
 Gly Ile Val Glu Val Tyr Val Glu Pro Tyr Gly Asn Lys Ile Asn Gly  
 725 730 735  
 Cys Ala Phe Leu Asp Glu Asp Glu Glu Glu Lys Tyr Gly Asn Gln  
 740 745 750  
 Ile Glu Glu Asp Glu His Asn Glu Lys Ile Lys Met Lys Thr Phe Phe  
 755 760 765  
 Thr Gln Asn Ile Tyr Lys Lys Asn Asn Ile Tyr Pro Cys Tyr Met Lys  
 770 775 780  
 Leu Tyr Ser Gly Asp Ile Gly Gly Ile Leu Phe Pro Lys Asn Ile Lys  
 785 790 795 800  
 Ser Thr Thr Cys Phe Glu Glu Met Ile Pro Tyr Asn Lys Glu Ile Lys  
 805 810 815  
 Trp Asn Lys Glu Asn Lys Ser Leu Gly Asn Leu Val Asn Asn Ser Val  
 820 825 830  
 Val Tyr Asn Lys Glu Met Asn Ala Lys Tyr Phe Asn Val Gln Tyr Val  
 835 840 845  
 His Ile Pro Thr Ser Tyr Lys Asp Thr Leu Asn Leu Phe Cys Ser Ile  
 850 855 860  
 Ile Leu Lys Glu Glu Glu Ser Asn Leu Ile Ser Thr Ser Tyr Leu Val  
 865 870 875 880  
 Tyr Val Ser Ile Asn Glu Glu Leu Asn Phe Ser Leu Phe Asp Phe Tyr  
 885 890 895

Glu Ser Phe Val Pro Ile Lys Lys Thr Ile Gln Val Ala Gln Lys Asn  
 900 905 910  
 Val Asn Asn Lys Glu His Asp Tyr Thr Cys Asp Phe Thr Asp Lys Leu  
 915 920 925  
 Asp Lys Thr Val Pro Ser Thr Ala Asn Gly Lys Lys Leu Phe Ile Cys  
 930 935 940  
 Arg Lys His Leu Lys Glu Phe Asp Thr Phe Thr Leu Lys Cys Asn Val  
 945 950 955 960  
 Asn Lys Thr Gln Tyr Pro Asn Ile Glu Ile Phe Pro Lys Thr Leu Lys  
 965 970 975  
 Asp Lys Lys Glu Val Leu Lys Leu Asp Leu Asp Ile Gln Tyr Gln Met  
 980 985 990  
 Phe Ser Lys Phe Phe Lys Phe Asn Thr Gln Asn Ala Lys Tyr Leu Asn  
 995 1000 1005  
 Leu Tyr Pro Tyr Tyr Leu Ile Phe Pro Phe Asn His Ile Gly Lys Lys  
 1010 1015 1020  
 Glu Leu Lys Asn Asn Pro Thr Tyr Lys Asn His Lys Asp Val Lys Tyr  
 1025 1030 1035 1040  
 Phe Glu Gln Ser Ser Val Leu Ser Pro Leu Ser Ser Ala Asp Ser Leu  
 1045 1050 1055  
 Gly Lys Leu Leu Asn Phe Leu Asp Thr Gln Glu Thr Val Cys Leu Thr  
 1060 1065 1070  
 Glu Lys Ile Arg Tyr Leu Asn Leu Ser Ile Asn Glu Leu Gly Ser Asp  
 1075 1080 1085  
 Asn Asn Thr Phe Ser Val Thr Phe Gln Val Pro Pro Tyr Ile Asp Ile  
 1090 1095 1100  
 Lys Glu Pro Phe Tyr Phe Met Phe Gly Cys Asn Asn Asn Lys Gly Glu  
 1105 1110 1115 1120  
 Gly Asn Ile Gly Ile Val Glu Leu Leu Ile Ser Lys Gln Glu Glu Lys  
 1125 1130 1135  
 Ile Lys Gly Cys Asn Phe His Glu Ser Lys Leu Asp Tyr Phe Asn Glu  
 1140 1145 1150  
 Asn Ile Ser Ser Asp Thr His Glu Cys Thr Leu His Ala Tyr Glu Asn  
 1155 1160 1165  
 Asp Ile Ile Gly Phe Asn Cys Leu Glu Thr Thr His Pro Asn Glu Val  
 1170 1175 1180  
 Glu Val Glu Val Glu Asp Ala Glu Ile Tyr Leu Gln Pro Glu Asn Cys  
 1185 1190 1195 1200  
 Phe Asn Asn Val Tyr Lys Gly Leu Asn Ser Val Asp Ile Thr Thr Ile  
 1205 1210 1215  
 Leu Lys Asn Ala Gln Thr Tyr Asn Ile Asn Asn Lys Lys Thr Pro Thr  
 1220 1225 1230  
 Phe Leu Lys Ile Pro Pro Tyr Asn Leu Leu Glu Asp Val Glu Ile Ser  
 1235 1240 1245  
 Cys Gln Cys Thr Ile Lys Gln Val Val Lys Lys Ile Lys Val Ile Ile  
 1250 1255 1260

Thr Lys Asn Asp Thr Val Leu Leu Lys Arg Glu Val Gln Ser Glu<sup>1275</sup> Ser  
 1265 1270 1275 1280  
 Thr Leu Asp Asp Lys Ile Tyr Lys Cys Glu His Glu Asn Phe Ile Asn  
 1285 1290 1295  
 Pro Arg Val Asn Lys Thr Phe Asp Glu Asn Val Glu Tyr Thr Cys Asn  
 1300 1305 1310  
 Ile Lys Ile Glu Asn Phe Phe Asn Tyr Ile Gln Ile Phe Cys Pro Ala  
 1315 1320 1325  
 Lys Asp Leu Gly Ile Tyr Lys Asn Ile Gln Met Tyr Tyr Asp Ile Val  
 1330 1335 1340  
 Lys Pro Thr Arg Val Pro Gln Phe Lys Lys Phe Asn Asn Glu Glu Leu  
 1345 1350 1355 1360  
 His Lys Leu Ile Pro Asn Ser Glu Met Leu His Lys Thr Lys Glu Met  
 1365 1370 1375  
 Leu Ile Leu Tyr Asn Glu Glu Lys Val Asp Leu Leu His Phe Tyr Val  
 1380 1385 1390  
 Phe Leu Pro Ile Tyr Ile Lys Asp Ile Tyr Glu Phe Asn Ile Val Cys  
 1395 1400 1405  
 Asp Asn Ser Lys Thr Met Trp Lys Asn Gln Leu Gly Gly Lys Val Ile  
 1410 1415 1420  
 Tyr His Ile Thr Val Ser Lys Arg Glu Gln Lys Val Lys Gly Cys Ser  
 1425 1430 1435 1440  
 Phe Asp Asn Glu His Ala His Met Phe Ser Tyr Asn Lys Thr Asn Val  
 1445 1450 1455  
 Lys Asn Cys Ile Ile Asp Ala Lys Pro Lys Asp Leu Ile Gly Phe Val  
 1460 1465 1470  
 Cys Pro Ser Gly Thr Leu Lys Leu Thr Asn Cys Phe Lys Asp Ala Ile  
 1475 1480 1485  
 Val His Thr Asn Leu Thr Asn Ile Asn Gly Ile Leu Tyr Leu Lys Asn  
 1490 1495 1500  
 Asn Leu Ala Asn Phe Thr Tyr Lys His Gln Phe Asn Tyr Met Glu Ile  
 1505 1510 1515 1520  
 Pro Ala Leu Met Asp Asn Asp Ile Ser Phe Lys Cys Ile Cys Val Asp  
 1525 1530 1535  
 Leu Lys Lys Lys Lys Tyr Asn Val Lys Ser Pro Leu Gly Pro Lys Val  
 1540 1545 1550  
 Leu Arg Ala Leu Tyr Lys Lys Leu Asn Ile Lys Phe Asp Asn Tyr Val  
 1555 1560 1565  
 Thr Gly Thr Asp Gln Asn Lys Tyr Leu Met Thr Tyr Met Asp Leu His  
 1570 1575 1580  
 Leu Ser His Lys Arg Asn Tyr Leu Lys Glu Leu Phe His Asp Leu Gly  
 1585 1590 1595 1600  
 Lys Lys Lys Pro Ala Asp Thr Asp Ala Asn Pro Glu Ser Ile Ile Glu  
 1605 1610 1615  
 Ser Leu Ser Ile Asn Glu Ser Asn Glu Ser Gly Pro Phe Pro Thr Gly  
 1620 1625 1630  
 Asp Val Asp Ala Glu His Leu Ile Leu Glu Gly Tyr Asp Thr Trp Glu  
 168

169

Cys Lys Thr Ser His Thr Asn Thr Ile Gly Thr Met Lys Val Thr Leu  
 2020 2025 2030  
 Asn Lys Asp Glu Lys Glu Glu Glu Asp Phe Lys Thr Ala Gln Gly Ile  
 2035 2040 2045  
 Lys His Asn Asn Val His Leu Cys Asn Phe Phe Asp Asn Pro Glu Leu  
 2050 2055 2060  
 Thr Phe Asp Asn Asn Lys Ile Val Leu Cys Lys Ile Asp Ala Glu Leu  
 2065 2070 2075 2080  
 Phe Ser Glu Val Ile Ile Gln Leu Pro Ile Phe Gly Thr Lys Asn Val  
 2085 2090 2095  
 Glu Glu Gly Val Gln Asn Glu Glu Tyr Lys Lys Phe Ser Leu Lys Pro  
 2100 2105 2110  
 Ser Leu Val Phe Asp Asp Asn Asn Asn Asp Ile Lys Val Ile Gly Lys  
 2115 2120 2125  
 Glu Lys Asn Glu Val Ser Ile Ser Leu Ala Leu Lys Gly Val Tyr Gly  
 2130 2135 2140  
 Asn Arg Ile Phe Thr Phe Asp Lys Asn Gly Lys Lys Gly Glu Gly Ile  
 2145 2150 2155 2160  
 Ser Phe Phe Ile Pro Pro Ile Lys Gln Asp Thr Asp Leu Lys Phe Ile  
 2165 2170 2175  
 Ile Asn Glu Thr Ile Asp Asn Ser Asn Ile Lys Gln Arg Gly Leu Ile  
 2180 2185 2190  
 Tyr Ile Phe Val Arg Lys Asn Val Ser Glu Asn Ser Phe Lys Leu Cys  
 2195 2200 2205  
 Asp Phe Thr Thr Gly Ser Thr Ser Leu Met Glu Leu Asn Ser Gln Val  
 2210 2215 2220  
 Lys Glu Lys Lys Cys Thr Val Lys Ile Lys Lys Gly Asp Ile Phe Gly  
 2225 2230 2235 2240  
 Leu Lys Cys Pro Lys Gly Phe Ala Ile Phe Pro Gln Ala Cys Phe Ser  
 2245 2250 2255  
 Asn Val Leu Leu Glu Tyr Tyr Lys Ser Asp Tyr Glu Asp Ser Glu His  
 2260 2265 2270  
 Ile Asn Tyr Tyr Ile His Lys Asp Lys Lys Tyr Asn Leu Lys Pro Lys  
 2275 2280 2285  
 Asp Val Ile Glu Leu Met Asp Glu Asn Phe Arg Glu Leu Gln Asn Ile  
 2290 2295 2300  
 Gln Gln Tyr Thr Gly Ile Ser Asn Ile Thr Asp Val Leu His Phe Lys  
 2305 2310 2315 2320  
 Asn Phe Asn Leu Gly Asn Leu Pro Leu Asn Phe Lys Asn His Tyr Ser  
 2325 2330 2335  
 Thr Ala Tyr Ala Lys Val Pro Asp Thr Phe Asn Ser Ile Ile Asn Phe  
 2340 2345 2350  
 Ser Cys Asn Cys Tyr Asn Pro Glu Lys His Val Tyr Gly Thr Met Gln  
 2355 2360 2365  
 Val Glu Ser Asp Asn Arg Asn Phe Asp Asn Ile Lys Lys Asn Glu Asn  
 2370 2375 2380

Val Ile Lys Asn Phe Leu Leu Pro Asn Ile Glu Lys Tyr Ala Leu Leu  
 2385 2390 2395 2400

Leu Asp Asp Glu Glu Arg Gln Lys Lys Ile Lys Gln Gln Gln Glu Glu  
 2405 2410 2415

Glu Gln Gln Glu Gln Ile Leu Lys Asp Gln Asp Asp Arg Leu Ser Arg  
 2420 2425 2430

His Asp Asp Tyr Asn Lys Asn His Thr Tyr Ile Leu Tyr Asp Ser Asn  
 2435 2440 2445

Glu His Ile Cys Asp Tyr Glu Lys Asn Glu Ser Leu Ile Ser Thr Leu  
 2450 2455 2460

Pro Asn Asp Thr Lys Lys Ile Gln Lys Ser Ile Cys Lys Ile Asn Ala  
 2465 2470 2475 2480

Lys Ala Leu Asp Val Val Thr Ile Lys Cys Pro His Thr Lys Asn Phe  
 2485 2490 2495

Thr Pro Lys Asp Tyr Phe Pro Asn Ser Ser Leu Ile Thr Asn Asp Lys  
 2500 2505 2510

Lys Ile Val Ile Thr Phe Asp Lys Lys Asn Phe Val Thr Tyr Ile Asp  
 2515 2520 2525

Pro Thr Lys Lys Thr Phe Ser Leu Lys Asp Ile Tyr Ile Gln Ser Phe  
 2530 2535 2540

Tyr Gly Val Ser Leu Asp His Leu Asn Gln Ile Lys Lys Ile His Glu  
 2545 2550 2555 2560

Glu Trp Asp Asp Val His Leu Phe Tyr Pro Pro His Asn Val Leu His  
 2565 2570 2575

Asn Val Val Leu Asn Asn His Ile Val Asn Leu Ser Ser Ala Leu Glu  
 2580 2585 2590

Gly Val Leu Phe Met Lys Ser Lys Val Thr Gly Asp Glu Thr Ala Thr  
 2595 2600 2605

Lys Lys Asn Thr Thr Leu Pro Thr Asp Gly Val Ser Ser Ile Leu Ile  
 2610 2615 2620

Pro Pro Tyr Val Lys Glu Asp Ile Thr Phe His Leu Phe Cys Gly Lys  
 2625 2630 2635 2640

Ser Thr Thr Lys Lys Pro Asn Lys Lys Asn Thr Ser Leu Ala Leu Ile  
 2645 2650 2655

His Ile His Ile Ser Ser Asn Arg Asn Ile Ile His Gly Cys Asp Phe  
 2660 2665 2670

Leu Tyr Leu Glu Asn Gln Thr Asn Asp Ala Ile Ser Asn Asn Asn Asn  
 2675 2680 2685

Asn Ser Tyr Ser Ile Phe Thr His Asn Lys Asn Thr Glu Asn Asn Leu  
 2690 2695 2700

Ile Cys Asp Ile Ser Leu Ile Pro Lys Thr Val Ile Gly Ile Lys Cys  
 2705 2710 2715 2720

Pro Asn Lys Lys Leu Asn Pro Gln Thr Cys Phe Asp Glu Val Tyr Tyr  
 2725 2730 2735

Val Lys Gln Glu Asp Val Pro Ser Lys Thr Ile Thr Ala Asp Lys Tyr  
 2740 2745 2750

Asn Thr Phe Ser Lys Asp Lys Ile Gly Asn Ile Leu Lys Asn Ala Ile

2755	2760	2765
Ser Ile Asn Asn Pro Asp Glu Lys Asp Asn Thr Tyr Thr Tyr Leu Ile 2770	2775	2780
Leu Pro Glu Lys Phe Glu Glu Glu Leu Ile Asp Thr Lys Lys Val Leu 2785	2790	2795 2800
Ala Cys Thr Cys Asp Asn Lys Tyr Ile Ile His Met Lys Ile Glu Lys 2805	2810	2815
Ser Thr Met Asp Lys Ile Lys Ile Asp Glu Lys Lys Thr Ile Gly Lys 2820	2825	2830
Asp Ile Cys Lys Tyr Asp Val Thr Thr Lys Val Ala Thr Cys Glu Ile 2835	2840	2845
Ile Asp Thr Ile Asp Ser Ser Val Leu Lys Glu His His Thr Val His 2850	2855	2860
Tyr Ser Ile Thr Leu Ser Arg Trp Asp Lys Leu Ile Ile Lys Tyr Pro 2865	2870	2875 2880
Thr Asn Glu Lys Thr His Phe Glu Asn Phe Phe Val Asn Pro Phe Asn 2885	2890	2895
Leu Lys Asp Lys Val Leu Tyr Asn Tyr Asn Lys Pro Ile Asn Ile Glu 2900	2905	2910
His Ile Leu Pro Gly Ala Ile Thr Thr Asp Ile Tyr Asp Thr Arg Thr 2915	2920	2925
Lys Ile Lys Gln Tyr Ile Leu Arg Ile Pro Pro Tyr Val His Lys Asp 2930	2935	2940
Ile His Phe Ser Leu Glu Phe Asn Asn Ser Leu Ser Leu Thr Lys Gln 2945	2950	2955 2960
Asn Gln Asn Ile Ile Tyr Gly Asn Val Ala Lys Ile Phe Ile His Ile 2965	2970	2975
Asn Gln Gly Tyr Lys Glu Ile His Gly Cys Asp Phe Thr Gly Lys Tyr 2980	2985	2990
Ser His Leu Phe Thr Tyr Ser Lys Lys Pro Leu Pro Asn Asp Asp Asp 2995	3000	3005
Ile Cys Asn Val Thr Ile Gly Asn Asn Thr Phe Ser Gly Phe Ala Cys 3010	3015	3020
Leu Ser His Phe Glu Leu Lys Pro Asn Asn Cys Phe Ser Ser Val Tyr 3025	3030	3035 3040
Asp Tyr Asn Glu Ala Asn Lys Val Lys Lys Leu Phe Asp Leu Ser Thr 3045	3050	3055
Lys Val Glu Leu Asp His Ile Lys Gln Asn Thr Ser Gly Tyr Thr Leu 3060	3065	3070
Ser Tyr Ile Ile Phe Asn Lys Glu Ser Thr Lys Leu Lys Phe Ser Cys 3075	3080	3085
Thr Cys Ser Ser Asn Tyr Ser Asn Tyr Thr Ile Arg Ile Thr Phe Asp 3090	3095	3100
Pro Asn Tyr Ile Ile Pro Glu Pro Gln Ser Arg Ala Ile Ile Lys Tyr 3105	3110	3115 3120
Val Asp Leu Gln Asp Lys Asn Phe Ala Lys Tyr Leu Arg Lys Leu 3125	3130	3135



<210> 81  
 <211> 679  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 81  
 Met Ser Asp Asp Asp Asp Lys Ile Tyr Ile Tyr Ser Asp Leu Phe Ser  
 1 5 10 15  
 Lys Asn Phe Ser Asp Asp Glu Lys Asp Asp Ser Tyr Glu Arg Glu Lys  
 20 25 30  
 Gln Val Tyr Ser Gly Ser Glu Thr Gln Asn Ala Glu Asn Glu Tyr Ser  
 35 40 45  
 Lys Leu Arg Ala Gln Asn Ser Thr Ile Leu Asn Asn Tyr Phe Asp Asn  
 50 55 60  
 Asp Asn Ile Lys Asn Val Glu Asn Leu Lys Ser Asn Asp Pro Asp Gln  
 65 70 75 80  
 Ile Asp Leu Ile Leu Phe Pro Val Asn Lys Asn Tyr Tyr Met Asn Leu  
 85 90 95  
 Phe Asp Gly Gln Leu Ile Glu Asn Ile His Ser Ile Lys Leu Arg Lys  
 100 105 110  
 Ala Gly Phe Tyr Ala Ile Tyr Val Glu Asn Asn Asn Asn Ser Lys Trp  
 115 120 125  
 Asp Gly Ile Tyr Phe Gly Leu Ser Arg Met Gln Val Glu Leu Asp Tyr  
 130 135 140  
 Lys Leu Ile Thr Lys Lys Asn Lys Asp Gly Gly Glu Tyr Glu Lys Arg  
 145 150 155 160  
 Asn Thr Ser Ser Tyr Asp Asn Thr Glu Ser Val Gln Asn Thr Val Gly  
 165 170 175  
 Ser Glu Lys Glu Glu Thr Glu Asn Lys Asn Glu Glu Thr Ser Asn Tyr  
 180 185 190  
 Asn Ser Asn Leu Asn Asn Glu Ile Asn Lys Ile Cys Lys Tyr Asn Leu  
 195 200 205  
 Asp Gln Thr Asp Ile Leu Leu Asp Asp Ser Asn Ser Glu Arg Arg Arg  
 210 215 220  
 Asn Ser Lys Phe Lys Ile Lys Asn Thr Asn Tyr Tyr Asp Asn Leu Met  
 225 230 235 240  
 Leu Gln Asn Lys Tyr Thr Asn Ser Ile Leu Tyr Asp Asp Asp Asp Asp  
 245 250 255  
 Lys Asn Asn Thr Glu Thr Tyr Thr Cys Thr Phe Lys Thr Glu Asp Gln  
 260 265 270  
 Ile Arg Val Pro Ser Gln Lys Lys Lys Tyr Ile Tyr Leu Tyr Asn Lys  
 275 280 285  
 Tyr Asp Asn Ala Thr Leu Asp Leu Asn Val His Thr Tyr Met Ser Leu  
 290 295 300  
 Gly Met Ser Ile Leu Cys Lys Tyr Ser Leu Leu Tyr Cys Gly Lys Tyr  
 305 310 315 320  
 Asn His Ile Pro Arg Asp Pro Tyr Thr Pro Phe Lys Lys Pro Val Ser  
 325 330 335

Ile Leu Ser Leu Asp Gly Gly Gly Ile Leu Thr Ile Ser Thr Leu Leu  
 340 345 350  
 Val Leu Asn Arg Leu Glu Ala Glu Leu Arg Lys Glu Ile Gly Ser Asp  
 355 360 365  
 Asp Ile Lys Leu Ile Asp Cys Phe Asp Met Val Cys Gly Thr Ser Ala  
 370 375 380  
 Gly Gly Leu Ile Ser Leu Ala Leu Leu Arg Glu Ile Asp Leu Gln Asp  
 385 390 395 400  
 Val Ser Asn Met Trp Pro Ser Thr Ile Lys Lys Val Phe Glu Gly Asn  
 405 410 415  
 Arg Asn Ile Ile Ser Gly Ile Phe Phe Glu Gly Tyr Asp Val Asn Asn  
 420 425 430  
 Val Lys Asp Val Phe Leu Glu Arg Met Gly Asn Lys Phe Met Ser Ser  
 435 440 445  
 Tyr Lys Lys Phe Tyr Cys Phe Val Thr Ala Thr Asp Val Lys His Lys  
 450 455 460  
 Pro Tyr Lys Leu Phe Leu Ile Arg Asn Tyr Thr His Lys Tyr Asn Ser  
 465 470 475 480  
 Ile Asn Ala Glu Ser Tyr Asp Gly Ile Asn Lys Val Pro Leu Trp Leu  
 485 490 495  
 Ala Ala Trp Ala Thr Ala Ser Ala Pro Thr Tyr Leu Lys Gly Pro Ser  
 500 505 510  
 Ala Glu Asp Ile Lys Lys Leu Gly Ile Asn Ile Lys Pro Glu Ile His  
 515 520 525  
 Leu Val Asp Gly Ala Leu Lys Ala Ser Asn Pro Ala Leu Ile Ala Leu  
 530 535 540  
 Glu Glu Cys Ala Arg Leu Asn Asn Lys Asn Leu Ser Thr Phe Ile Lys  
 545 550 555 560  
 Glu Asp Leu Asp Thr Leu Val Ser Ile Gly Thr Gly Gln Val Pro Thr  
 565 570 575  
 Lys Leu Thr Gln Ser Gly Ala Ser Ser Lys Ser Ala Ser Thr Phe Glu  
 580 585 590  
 Ile Leu Ile Asn Ser Thr His Leu Leu Thr Arg Ala Asn Asp Thr His  
 595 600 605  
 Arg Glu Val Leu Gln Arg Leu Ala Asp Arg Glu Asn Thr Tyr Phe Arg  
 610 615 620  
 Phe Asn Val Pro His Ile Gly Asp Ile Glu Ile Asp Ser Gln Asp Val  
 625 630 635 640  
 Arg Asp Phe Asp Leu Ile Ser Lys Ala Thr Gln Asp Tyr Leu Phe Asp  
 645 650 655  
 Glu Lys Phe Tyr Glu Ile Lys Arg Leu Ala His Lys Leu Ala Asn Asn  
 660 665 670  
 Tyr Ile Arg Ser Lys Tyr Leu  
 675

&lt;210&gt; 82

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 82

Met Tyr Ile Cys Phe Phe Phe Phe Phe Phe Phe Leu Val Ile Lys Leu  
 1 5 10 15

Gly Glu Asp Glu Asn Phe Gly Ser Ser Cys Phe Tyr Ser Leu Gly Asn  
 20 25 30

Thr Lys Ile Leu Thr Thr Val Tyr Gly Pro Asn Pro Asp Ser Lys Tyr  
 35 40 45

Ala Thr Tyr Ser Lys Gly Lys Val Phe Leu Asp Val Lys Ser Leu Asn  
 50 55 60

Ile Asn Thr Ile Gly Ala Ser Asp Arg Val Leu Tyr Ile Tyr Gly Phe  
 65 70 75 80

Phe Phe Phe Phe Phe Phe Phe Phe Phe Phe Ile Leu Asn Arg Ser Tyr  
 85 90 95

Phe Phe Leu Val Leu Phe Ile Ile Phe Ile  
 100 105

&lt;210&gt; 83

&lt;211&gt; 240

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 83

Met Phe Leu Lys Gly Tyr Thr Ser Asn Val Val Leu Ile Ile Leu Thr  
 1 5 10 15

Phe Phe Ile Leu Leu Thr Lys Glu Glu Lys Asn Ile Lys Asn Asn Ile  
 20 25 30

Ser Gly Tyr Cys Phe Leu Asn Phe Gly Leu Lys Lys Asn Ala Ile Ile  
 35 40 45

Lys Lys Arg Glu Lys Gln Asn Leu Lys Leu Phe Cys Tyr Asn Gly Ile  
 50 55 60

Arg Ile Gly Gln Gly Tyr Asp Ile His Lys Ile Lys Val Leu Asp Glu  
 65 70 75 80

Glu Tyr Asn Thr Tyr Ala Asn Asn Asp Phe Asn Lys Asn Glu Gln Ser  
 85 90 95

Phe Lys Thr Leu Thr Leu Gly Gly Val Lys Ile Asn Asn Val Leu Val  
 100 105 110

Leu Ser His Ser Asp Gly Asp Ile Ile Tyr His Ser Ile Val Asp Ser  
 115 120 125

Ile Leu Gly Ala Leu Gly Ser Leu Asp Ile Gly Thr Leu Phe Pro Asp  
 130 135 140

Lys Asp Glu Lys Asn Lys Asn Lys Asn Ser Ala Ile Phe Leu Arg Tyr  
 145 150 155 160

Ala Arg Leu Leu Ile Tyr Lys Lys Asn Tyr Asp Ile Gly Asn Val Asp  
 165 170 175

Ile Asn Val Ile Ala Gln Val Pro Lys Ile Ser Asn Ile Arg Lys Asn  
 180 185 190

Ile Ile Lys Asn Ile Ser Thr Val Leu Asn Ile Asp Glu Ser Gln Ile  
 195 200 205

Ser Val Lys Gly Lys Thr His Glu Lys Leu Gly Val Ile Gly Glu Lys  
 210 215 220  
 Lys Ala Ile Glu Cys Phe Ala Asn Ile Leu Leu Ile Pro Lys Asn Ser  
 225 230 235 240

<210> 84  
 <211> 273  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 84  
 Met Glu Asp Gln Asn Ala Glu Tyr Thr Lys Lys Asn Asn Ile Ser Asp  
 1 5 10 15  
 Lys Leu Glu Arg Leu Arg Glu Leu Phe Ile Asn Ala Asp Lys Asn Thr  
 20 25 30  
 His Glu Met Leu Lys Cys Asn Val Asp Glu Lys Ile Trp Thr Phe Phe  
 35 40 45  
 Leu Ser Tyr His Ile Asn Lys Asp Met Lys Ile Thr Glu Ser Ser Trp  
 50 55 60  
 Leu Phe Asn Glu Tyr Tyr Phe Tyr Arg Tyr Leu Cys Cys Ala Tyr Asp  
 65 70 75 80  
 Phe Glu Lys Thr Asn Tyr Asp Phe Phe Gln Tyr Glu Lys Gln Asp Ser  
 85 90 95  
 Ile Asn Cys Asn Lys Val Ile Ile Glu Asn Ile Cys Thr Cys Ala Lys  
 100 105 110  
 Thr Leu Ile Glu Leu Tyr Asp Lys Asn Pro Gln Lys Lys Ile Phe Ser  
 115 120 125  
 Val Phe Phe Tyr Tyr Ala Leu Trp Ala Asn Gln Phe Asp Leu Ser Trp  
 130 135 140  
 Asn Pro Thr Lys Asn Lys Ser Glu Gln His Asn Val Gln Glu Lys Asp  
 145 150 155 160  
 Ile Arg Lys Lys Thr Leu Arg Glu Lys Gln Phe Cys Phe Asp Thr Asp  
 165 170 175  
 Asp Ile Asp Lys Leu Tyr Asn Ser Phe Tyr Met Glu Asn Ile Leu Cys  
 180 185 190  
 Asn Asp Ile Asn Asp Ile Tyr Lys Asp Met Thr Val Gln Lys His Lys  
 195 200 205  
 Arg Phe Asp Ile Val Leu Asp Asn Met Gly Val Glu Phe Ile Thr Asp  
 210 215 220  
 Phe Cys Leu Leu Tyr Phe Leu Thr His Tyr Phe Glu Glu Ile Thr Ile  
 225 230 235 240  
 His Val Lys Lys Phe Pro Leu Phe Val Ser Asp Thr Met Ile Lys Asp  
 245 250 255  
 Ile His Tyr Thr Leu Asn Val Leu Cys Asn Asp Glu Lys Val Lys Ile  
 260 265 270

Lys

<210> 85  
 <211> 504  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 85

Met	Asn	Val	Ser	Val	Thr	Ile	Lys	Gly	Asn	Leu	Ser	Asn	Ser	Ser	Thr
1				5					10					15	
Glu	Lys	Asn	Lys	Asn	Ser	Ser	Lys	Lys	Asn	Asp	Ala	Ser	Val	Phe	Phe
			20					25					30		
Lys	Phe	Lys	Lys	Glu	Asn	Leu	Asp	Lys	Lys	Ile	Ile	Lys	Asn	Asn	Ile
		35					40					45			
Val	Arg	Lys	Glu	Lys	Asn	Ser	Leu	Asn	Lys	Lys	Gly	Thr	Ser	Asn	Asn
	50					55					60				
Thr	Thr	Asn	Ser	Phe	Ser	Lys	Gly	Asn	Asn	Ile	Lys	Leu	Ser	Gly	Asp
	65				70					75					80
Thr	His	Ala	Arg	Asn	Val	Ile	Asn	Glu	Lys	Lys	Ile	Leu	Ser	Glu	Lys
				85					90					95	
Lys	Asn	Gly	Phe	Thr	Thr	Lys	Tyr	Asp	Ser	Lys	Lys	Ser	Tyr	Ser	Ser
			100					105					110		
Lys	Lys	Ser	Ser	Leu	Leu	Asn	Lys	Leu	Pro	Ser	Ser	Glu	Ile	Thr	Leu
		115					120					125			
Asn	Asn	Ser	Asn	Leu	Lys	Phe	Phe	Glu	Lys	Lys	Lys	Ser	Lys	Asp	Lys
		130				135					140				
Gln	Asn	Val	Ile	Asn	Asn	Ile	Asn	Gly	Ser	Lys	Leu	Ile	Asn	Asn	Val
145					150					155					160
Asp	Lys	Leu	Tyr	Thr	Asn	Asn	Asp	Asn	Ile	Asn	Asn	Asn	Ile	Asn	Glu
				165					170					175	
Lys	Lys	Ser	Ser	Asn	Ile	Phe	Thr	Lys	Asn	Ile	Gln	Lys	Lys	Asn	Lys
			180					185					190		
Thr	Asn	Ser	Ser	Asn	Asn	Leu	Asn	Thr	Ser	Asn	Val	Asn	Lys	Lys	Thr
		195					200					205			
Tyr	Lys	Leu	Gly	Asn	Val	Leu	Ala	Gln	Pro	Glu	Lys	Phe	Ile	Arg	Lys
	210					215					220				
Lys	Lys	Asn	Lys	Ile	Ile	Lys	Asn	Leu	Asn	Ser	Leu	Lys	Arg	Asn	Ile
225					230					235					240
Asp	Ile	Met	Met	Lys	Ser	Glu	Gln	Asp	Gln	Asn	Ile	Leu	Glu	Glu	His
				245				250						255	
Met	Ser	Ser	Val	Ser	Ser	Ser	Asn	Glu	Lys	Gln	Lys	Asn	Lys	Asn	Asn
			260					265					270		
Asn	Ile	Glu	Gln	Asn	Glu	Asn	Met	Thr	Lys	Leu	Glu	Lys	Asn	Gly	Asp
		275					280					285			
Asp	Asn	Ile	Tyr	Met	Lys	Asp	Asn	Lys	Lys	Asn	Asp	Glu	Gln	Lys	Gly
	290					295					300				
Asp	Asn	Asn	Thr	Lys	Glu	Gln	Ile	His	Ile	Asn	Asp	Asp	Asp	Glu	Lys
305					310					315					320
Lys	Thr	Phe	His	Asp	Lys	Lys	Asp	Asp	Met	Glu	Asn	Asn	Thr	Gln	Glu
				325					330					335	

Thr Lys Thr Asn Ile Phe Gln Asp Asn Ala Val Asp Thr Ile Asn Gly  
 340 345 350  
 His Ile Cys Lys Asp Glu Lys Met Leu Phe Pro Tyr Phe Ile Glu Ala  
 355 360 365  
 Thr Tyr Asp Lys Asn Thr Asp Ile Phe Asn Glu Lys Tyr Asp Asp Asp  
 370 375 380  
 Asp Asn Asn Lys Glu Thr Asn Asn Leu Leu Leu Pro Gly Tyr His Asn  
 385 390 395 400  
 Val Thr Phe Glu Asn Val Ser Glu Asn Asn Lys Met Tyr Asn Ile Asn  
 405 410 415  
 Asn Asn Asn Lys Asn Asn Asn Asn Pro Ile Ser Asn Asn Ile Tyr Ala  
 420 425 430  
 Thr Asn Ser Ser Phe Pro Pro Tyr Lys Phe Ile Ser Tyr Leu Arg Pro  
 435 440 445  
 Lys Leu Thr Pro Lys Ala Tyr His Leu Lys Asn Asn Glu Ile Leu Asn  
 450 455 460  
 Asn Phe Leu Phe Thr Ser Ser Asp Ile Thr Arg Gly Thr Ile Tyr Gln  
 465 470 475 480  
 Gln Tyr Asn Met Thr Val Thr Tyr Pro Tyr Gly Val Pro Tyr Ile Asn  
 485 490 495  
 Met Lys Asn Lys Ile Thr Lys Lys  
 500

<210> 86  
 <211> 1138  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 86  
 Met Val Val His Asn Lys Asn Ile Ala Thr His Lys Phe Pro Leu His  
 1 5 10 15  
 Lys Lys Tyr Lys Lys Ile Met Ser Gln Lys Leu Arg Ser Ser Val Thr  
 20 25 30  
 Arg Thr Ser Asn Glu Glu Ser Asn Glu Asp Asp Lys Asn Cys Val Asn  
 35 40 45  
 Val Asn Ser Glu Glu Phe Ser Val Lys Lys Ile Arg Ser Ile Leu Tyr  
 50 55 60  
 Glu Glu Ser Ile Asn Phe Ser Asp Lys Asn Thr Tyr Tyr Lys Ser Ser  
 65 70 75 80  
 Asn Ile His Asn Tyr Asn Asn Ile Asp Thr Tyr Met Asp Tyr Ile Lys  
 85 90 95  
 Lys Ser Asn Tyr Ala Arg Ser Tyr Glu Gln Glu Asn Ile Tyr Asn Glu  
 100 105 110  
 Ala Leu Asn Leu Tyr Asn Asn Arg Asn Val Tyr Ile Lys Lys Lys Tyr  
 115 120 125  
 Arg Asn Asp Ser Tyr Tyr Asn Ile Lys Arg Asp Leu Lys Arg Gly His  
 130 135 140  
 Tyr Phe Gly Asp Asp Ala Glu Tyr Met Asp Tyr Met Asp Asn Glu Ser  
 145 150 155 160

Ile Asp Tyr Asn Asn Met Asn Asp Gln Tyr Lys Asp Gly Asn His Ile  
 165 170 175  
 Asp Asp Gln Tyr Lys Asp Gly Asn His Ile Asp Glu Lys His Lys Asp  
 180 185 190  
 Gly Asn Arg Ile Asp Asp Gln Tyr Lys Asp Gly Asn Arg Ile Asp Asp  
 195 200 205  
 Lys Ile Val Lys Ser Glu His Ile Cys Asn Glu Lys Lys Thr Lys Gly  
 210 215 220  
 Val Asn Gly Lys Ser Lys Tyr Tyr Ile His Asp Met Asn Arg Lys Asp  
 225 230 235 240  
 Lys Gln Lys Lys Asn Lys His Asn Asn Ile Asn Tyr Asn Asn Asn Asp  
 245 250 255  
 Asp Asn Val Asn Asn Ser Cys Glu Tyr Asn Phe Ser Lys Glu Asn Ser  
 260 265 270  
 Gln Asn Met Cys His Tyr Glu Asn Lys Ile Tyr Asp Lys Tyr Gly Glu  
 275 280 285  
 Phe Asp Thr Phe Val Glu Lys Phe Cys Asp Asp Ile Asn Ile Asp Asn  
 290 295 300  
 Cys Asn Leu Arg His Val Lys Tyr Thr Gln Ala Leu Tyr Glu Lys Arg  
 305 310 315 320  
 Lys Lys Glu Gln Asn Ile Ile Phe Tyr Lys Lys Tyr Lys Glu Leu Phe  
 325 330 335  
 Gly Lys Asn Lys Leu Asn Leu Lys Asn Gly Asn Asp Ile Asn Asn Arg  
 340 345 350  
 Lys Lys Ser Leu Arg Cys Met Asn Glu Gly Thr Asn Asn Ile Phe Lys  
 355 360 365  
 Gly Asn Asp Asp Glu Ile Tyr Asn Asn Asn Tyr Asn Asn Arg Asp Leu  
 370 375 380  
 Leu Thr Asp Ile Lys Glu Leu Asn Ser Met Ser Glu Ser Asn Gly Tyr  
 385 390 395 400  
 Asn Glu Lys Glu Glu Asn Phe Leu Glu Gln Leu Ile Lys Leu Arg Tyr  
 405 410 415  
 Thr Pro Asp Gln Ile Thr Gln Leu Ser Asp Leu Phe Glu Asn Pro Lys  
 420 425 430  
 Thr Leu Lys Thr Val Asn Val Lys Ile Leu Asn Trp Leu Asn Cys Gln  
 435 440 445  
 Leu Asn Asn Gly Tyr Trp Leu Glu Arg Phe Ser Leu Phe Leu Leu Gly  
 450 455 460  
 Leu Thr Ile Ala Ile Gly Val Gly Asn Ile Glu Thr Ile Trp Phe Leu  
 465 470 475 480  
 Met Ser Thr Trp His Gly Val Ile Phe Ile Val Pro Tyr Ile Leu Cys  
 485 490 495  
 Tyr Phe Phe Val Cys His Pro Ile Leu Thr Phe Glu Leu Tyr Ile Gly  
 500 505 510  
 Gln Leu Val Arg Thr Ser Thr Pro Phe Ile Phe Tyr Arg Leu Leu Lys  
 515 520 525

Pro Cys Ala Ser Val Gly Phe Leu Met Val Leu Ala Cys Leu Met Asn  
 530 535 540

Ser Tyr Ile Asn Ser Tyr Arg Thr Ala Ser Glu Tyr Phe Ile Tyr Leu  
 545 550 555 560

Ile Asn Ser Phe Lys Lys Asp Leu Pro Trp Lys Leu Ser Lys Glu Glu  
 565 570 575

Ile Lys Phe Cys Thr Asp Phe Lys Asn Asp Phe Val His Cys His Ser  
 580 585 590

His Arg Pro Leu Cys Leu Phe Ser Lys Gln Leu Ser Thr Cys Val Pro  
 595 600 605

Asn Ser Ile Gly Lys Ala Phe Leu Ile Tyr His Lys Lys Phe Phe Pro  
 610 615 620

Asn Asn Asn Leu Tyr Asn Phe Leu Leu Asn Ile Ser Asp His Lys Asn  
 625 630 635 640

Tyr Ile Asn Ile Phe Ser Asn Gly Asp Ser Tyr Phe Asp Lys Asp Thr  
 645 650 655

Leu Ile Phe Leu Phe Ile Cys Asn Phe Leu Val Thr Ser Phe Gln Leu  
 660 665 670

Phe Gly Leu Thr Asn Phe Ala Phe Ser Ala Ala Leu Val Leu Leu Leu  
 675 680 685

Ile Gly Phe Leu Ser Ile Thr Gln Phe Ala Thr Met Phe Asn Leu Asn  
 690 695 700

Ser Ala Ser Gln Ala Tyr Ser His Val Leu Lys Ser Trp Asn Phe Ser  
 705 710 715 720

Tyr Leu Tyr Thr Tyr Ser Ser Ile Trp Ser Gln Cys Val Ser Phe Ala  
 725 730 735

Leu Tyr Glu Leu Ser Ile Gly Met Gly Ile Tyr Ser Ser Leu Ala Thr  
 740 745 750

Lys Thr Arg Ile Gly Thr Asn Leu Ala Phe Asp Gly Tyr Ala Ile Thr  
 755 760 765

Thr Trp Asn Ser Ile Ile Ser Ser Leu Met Phe Phe Ser Ala Ile Ala  
 770 775 780

Val Ile Gly Phe Ile Ser Lys Ser Leu Asn Ser Asn Phe Val Asp Ile  
 785 790 795 800

Leu Glu Phe Ser Arg Ser Asp Cys Ser Phe Ile Leu Phe Pro Val Gly  
 805 810 815

Phe Thr Tyr Leu Lys Lys Met Glu Lys Thr Leu Cys Met Leu Tyr Tyr  
 820 825 830

Gly Ser Tyr Ala Val Leu Ser Cys Ala Ser Leu Ala Ile Gln Cys Glu  
 835 840 845

Val Ile Val Met Thr Ile Lys Asp Phe Lys Phe Cys Lys Asn Ile Lys  
 850 855 860

Lys Arg Asn Ile Ile Leu Leu Leu Ser Ile Leu Phe Phe Ile Ser Ser  
 865 870 875 880

Phe Phe Ile Ser Asn Ser Asp Ser Lys His Ile Ile Trp Phe Leu Asn  
 885 890 895

Phe Thr Ile Ser Glu Asn Gly Arg Val Phe Val Ser Leu Leu Ile Cys



900 905 910  
 Ile Ile Leu Gly Trp Phe Tyr Asn Thr Glu Tyr Gln Phe Lys Asn Leu  
 915 920 925  
 Thr Thr Lys Ser Val Leu Phe Phe Asn Ile Thr Tyr Trp Val Leu Asn  
 930 935 940  
 Ile Met Val Ser Ile Thr Phe Asn Tyr Leu Thr Tyr His Val Tyr Val  
 945 950 955 960  
 Leu Tyr Leu Cys Arg Ile Leu Ile Phe Leu Ile Ser Thr Ile Phe Ala  
 965 970 975  
 Leu Leu Val Leu Lys Ala Glu Val Tyr Leu Asn Lys Gly Glu Leu Glu  
 980 985 990  
 Ile Phe Tyr Asn Arg Thr Thr Tyr Lys Val Lys Tyr Ile Gln Lys Lys  
 995 1000 1005  
 Lys Lys Lys Lys Lys Lys Lys Thr Glu Leu Ile Leu Gly Arg Ile Ala  
 1010 1015 1020  
 Ile His Ile Ile Leu Thr His Ile Tyr Ile Tyr Ile Tyr Met Tyr Asn  
 1025 1030 1035 1040  
 Phe Phe Ser Leu Phe Phe Asn Leu Glu Tyr Ile Ile Cys Thr Ile Tyr  
 1045 1050 1055  
 Trp Lys Tyr Arg Asn Leu Lys Lys Arg Thr Thr Glu Asn Tyr Gln Trp  
 1060 1065 1070  
 Lys Cys Phe His Arg Lys Tyr Phe Tyr Ser Leu Thr Phe Glu Lys Tyr  
 1075 1080 1085  
 Cys Ala Tyr Asp Asp His Phe Val Asp Phe Ser Ile Leu Pro Ser Lys  
 1090 1095 1100  
 Pro Leu Lys Glu Val Gln Asn Phe Asn Ile Leu Ser Tyr Phe Tyr Glu  
 1105 1110 1115 1120  
 Phe Lys Asn Ile Arg Lys Arg Arg Lys Lys Lys Thr Lys Lys Ile Arg  
 1125 1130 1135  
 Val Asp

<210> 87  
 <211> 568  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 87  
 Met Lys Phe Gly Lys Asn Ile Arg Arg Glu Met His Asn His Ser Gly  
 1 5 10 15  
 Met His Tyr Ile Asn Tyr Lys Val Leu Lys Lys Leu Ile Lys Tyr Ile  
 20 25 30  
 Asn Asn Ser Ile Thr Glu Lys Glu Leu Glu Asn Gly Ile Glu Leu Asn  
 35 40 45  
 Lys Arg Phe Glu Glu Val Leu Leu His Asp Leu Asn Ile Ile Glu Glu  
 50 55 60  
 Thr Phe Val Lys Leu Phe Lys Glu Ile Met Asn Ile Lys Lys Glu Ile  
 65 70 75 80  
 Glu Lys Asn Tyr Ser Thr Val Glu Ile Val Asp Asn Asn Asp Ser Met

Lys	Ile	Ser	Lys	Glu	Cys	Ile	Ser	Phe	Asp	Thr	Leu	Leu	Asn	Ile	Leu
			100					105					110		
Lys	Glu	Glu	Asn	Val	Ser	Lys	Glu	Phe	Phe	Asn	Phe	Cys	Val	Gln	Leu
			115				120					125			
Ser	Ile	Leu	Ser	Asn	Lys	Cys	Lys	Ile	Ile	Arg	Thr	Tyr	Val	Ile	Tyr
			130			135					140				
Asn	Tyr	Ile	Gly	Leu	Ile	Lys	Ile	Leu	Lys	Lys	Lys	Asn	Lys	His	Cys
						150				155					160
Gly	Asn	Ile	Phe	Arg	Asn	Ile	Gln	Ile	Thr	Asp	Ile	Leu	Ser	Arg	Tyr
				165					170					175	
Thr	Trp	Cys	Leu	Ser	Asp	Glu	Leu	Pro	Lys	Leu	Ile	Ser	Ser	Val	Asn
			180					185					190		
Ile	Ile	Ser	Asp	Glu	Phe	Met	Gln	Lys	Tyr	Thr	Asn	Thr	Asn	Val	Thr
			195				200					205			
Ile	Glu	Lys	Tyr	Ile	Cys	Pro	Ile	Cys	Leu	Ser	Leu	Ile	His	Glu	Pro
			210			215					220				
Val	Thr	Leu	Asn	Ser	Cys	Phe	His	Ser	Phe	Cys	Trp	Lys	Cys	Leu	Ala
			225		230					235					240
Thr	Ala	Ile	Gln	Lys	Tyr	Ser	Ile	Asp	Asn	Cys	Pro	Ser	Cys	Arg	Thr
				245					250					255	
Lys	Ile	Val	Tyr	Asp	Lys	Asn	Ser	Phe	Lys	Ile	Asp	Gly	Ile	Leu	Asn
			260					265					270		
Gln	Phe	Leu	Glu	Lys	His	Phe	Leu	Ser	Ser	His	Asp	Lys	Glu	Lys	Asn
			275				280					285			
Arg	Pro	Phe	Lys	Gly	Gly	His	Gln	Lys	Gly	Glu	Asn	Gly	Met	Gln	Thr
			290			295					300				
Met	Asp	Thr	Glu	Ala	Phe	Lys	Arg	Glu	Asn	Ile	Lys	Arg	Tyr	Asn	Gly
					310					315					320
Gly	Gly	Glu	Asn	Ile	Asp	Arg	Tyr	Asn	Gly	Gly	Gly	Glu	Asn	Ile	Asp
				325					330					335	
Arg	Tyr	Asn	Gly	Gly	Gly	Glu	Asn	Ile	Asp	Arg	Tyr	Asn	Ile	Glu	Gly
			340					345					350		
Glu	Asn	Ile	Asp	Arg	Tyr	Asn	Val	Glu	Gly	Glu	Asn	Ile	Asp	Arg	Tyr
			355				360					365			
Asn	Ile	Glu	Gly	Glu	Asn	Ile	Asp	Arg	Tyr	Asn	Val	Glu	Lys	Asn	His
			370			375					380				
Leu	Ile	Lys	Lys	Thr	Asn	Lys	Asn	Ile	Asn	Ile	Ser	Asn	Asn	Asn	Lys
					390					395					400
Ile	Ser	Phe	Asn	Tyr	Ser	Asn	Asn	Tyr	Val	Leu	Ser	Asn	Gln	Val	Phe
				405					410					415	
Glu	Asn	Asn	Lys	Asn	Lys	Cys	Val	Met	Asn	His	Asn	Ile	Tyr	Asn	Ile
			420					425					430		
Lys	Asp	Glu	Glu	Lys	Gln	Lys	Val	Arg	Gly	Ser	Thr	Tyr	Thr	Gly	Ser
			435				440					445			
Ile	Leu	Ser	Ser	Ser	Asp	Ser	Ser	Asn	Ser	Asn	Gln	Asn	Asn	Tyr	Ile
						455					460				

Asn Phe Met Tyr Asn Lys Lys Gly Lys Asp Ile Ile Val Pro Met Thr  
 465 470 475 480  
 Lys Met Ser Ser Arg Leu Arg Glu Tyr Glu Ile Leu Asp Asp Glu Tyr  
 485 490 495  
 Val Asp Asn Ile Glu Cys Leu Asn Lys Tyr Val Ser Val Leu Asn Thr  
 500 505 510  
 Asn Asp Val Asn Ile Met Asp Asp Arg Glu Arg Glu Cys Ser Asp Tyr  
 515 520 525  
 Ser Asp Glu Phe Cys Asn Glu Val Ser Lys Asp Lys Ile Asn Asn Asn  
 530 535 540  
 Glu Asn Asn Lys Met Arg Gln Glu Asn Asn Tyr Asn Asn Ile Ile Asn  
 545 550 555 560  
 Asp Val Leu Ser Tyr Thr Phe Asn  
 565

<210> 88  
 <211> 457  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 88  
 Met Ala Ser Met Asp His Asn Ala Gln Asp Glu Leu Val Asp Tyr Glu  
 1 5 10 15  
 Asp Asp Glu Asn Ile Leu Asp Ser Lys Asp Val Lys Gly Asn Leu Gly  
 20 25 30  
 Asn Asn Ile Leu Asn Asn Asn Asn Lys Gly Gly Ala Met Arg Gly Ser  
 35 40 45  
 Tyr Ala Thr Val His Thr Gly Gly Phe Lys Asp Phe Phe Leu Lys Pro  
 50 55 60  
 Glu Leu Leu Arg Ala Ile Ser Glu Ser Gly Phe Glu His Pro Ser Glu  
 65 70 75 80  
 Val Gln Gln Glu Thr Ile Pro Ala Ala Ile Thr Gly Thr Asp Ile Leu  
 85 90 95  
 Cys Gln Ala Lys Ser Gly Met Gly Lys Thr Ala Val Phe Val Leu Ser  
 100 105 110  
 Ile Leu Gln Gln Leu Asp Thr Asn Glu Asn Gln Asp Met Gln Asp Thr  
 115 120 125  
 Lys Glu Met Asn Asn Asp Asn Asn Asn Asn Gly Asp Asn Lys Phe Val  
 130 135 140  
 Arg Cys Leu Gly Leu Ala His Thr Arg Glu Leu Ala Tyr Gln Ile Lys  
 145 150 155 160  
 Asn Glu Phe Asp Arg Phe Ser Lys Tyr Leu Lys Asn Val Arg Cys Glu  
 165 170 175  
 Val Val Tyr Gly Gly Ile Ser Met Asn Lys His Ile Lys Leu Phe Lys  
 180 185 190  
 Glu Asp Asn Ile Pro His Ile Ile Ile Gly Thr Pro Gly Arg Ile Leu  
 195 200 205  
 Ala Leu Ile Arg Glu Lys Tyr Leu Ile Thr Asp Lys Ile Gln His Phe  
 210 215 220

Val Leu Asp Glu Cys Asp Lys Cys Leu Glu Lys Leu Asp Met Arg Ser  
 225 230 235 240  
 Asp Val Gln Lys Ile Phe Ile Ser Thr Pro Leu Lys Lys Gln Val Met  
 245 250 255  
 Phe Phe Ser Ala Thr Met Ala Lys Glu Met Arg Asp Val Cys Lys Lys  
 260 265 270  
 Phe Leu Gln Asn Pro Val Glu Ile Phe Ile Asp Asp Glu Ala Lys Leu  
 275 280 285  
 Lys Leu His Gly Leu Leu Gln His Tyr Val Lys Leu Gln Glu Lys Asp  
 290 295 300  
 Lys Thr Arg Lys Leu Ile Glu Ile Leu Asp Ala Leu Glu Phe Asn Gln  
 305 310 315 320  
 Val Ile Ile Phe Val Lys Ser Val Thr Arg Ala Ile Thr Leu Asp Lys  
 325 330 335  
 Leu Leu Thr Glu Cys Asn Phe Pro Ser Ile Ala Ile His Gly Gly Leu  
 340 345 350  
 Glu Gln Gln Glu Arg Ile Glu Arg Tyr Asp Lys Phe Lys Lys Phe Glu  
 355 360 365  
 Asn Arg Ile Leu Val Ser Thr Asp Leu Phe Gly Arg Gly Ile Asp Ile  
 370 375 380  
 Glu Arg Val Asn Ile Val Ile Asn Tyr Asp Met Pro Glu Asn Ser Asp  
 385 390 395 400  
 Ser Tyr Leu His Arg Val Gly Arg Ala Gly Arg Phe Gly Thr Lys Gly  
 405 410 415  
 Leu Ala Val Thr Phe Val Ser Ser Gln Glu Asp Thr Leu Ala Leu Asn  
 420 425 430  
 Glu Val Gln Thr Arg Phe Glu Val Ala Ile Ser Glu Met Pro Asn Lys  
 435 440 445  
 Ile Asp Cys Asn Glu Tyr Ile Asn Gln  
 450 455

&lt;210&gt; 89

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 89

Met Asn Val Lys Ile Pro Glu Phe Leu Thr Asp Glu Asn His Pro Val  
 1 5 10 15  
 Gly Tyr Cys Val Asn Gly Ile Gln Thr Phe Val Glu Asp Ser Val Arg  
 20 25 30  
 Leu Ile Arg Lys Cys Thr Lys Pro Asn Lys Lys Glu Tyr Thr Asn Ile  
 35 40 45  
 Val Tyr Ala Cys Ser Phe Gly Phe Leu Ile Met Gly Phe Ile Gly Tyr  
 50 55 60  
 Ile Ile Lys Leu Val Phe Ile Pro Ile Asn Asn Ile Phe Val Gly Ser  
 65 70 75 80

Tyr

<210> 90  
 <211> 96  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 90  
 Met Ser Arg Arg Thr Lys Lys Val Gly Leu Thr Gly Lys Tyr Gly Thr  
 1 5 10 15  
 Arg Tyr Gly Ser Ser Leu Arg Lys Gln Ile Lys Lys Ile Glu Leu Met  
 20 25 30  
 Gln His Ala Lys Tyr Leu Cys Thr Phe Cys Gly Lys Thr Ala Thr Lys  
 35 40 45  
 Arg Thr Cys Val Gly Ile Trp Lys Cys Lys Lys Cys Lys Arg Lys Val  
 50 55 60  
 Cys Gly Gly Ala Trp Ser Leu Thr Thr Pro Ala Ala Val Ala Ala Lys  
 65 70 75 80  
 Ser Thr Ile Ile Arg Leu Arg Lys Gln Lys Glu Glu Ala Gln Lys Ser  
 85 90 95

<210> 91  
 <211> 2573  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 91  
 Met Ser Phe Lys Asn Asn Glu Lys Tyr Met Asp Glu Glu Asn Asp Gln  
 1 5 10 15  
 Glu Ser Asp Asp Glu Phe Phe Lys Val Lys Arg Lys Pro Gln Ile Asn  
 20 25 30  
 Val Asp Ala Glu Glu Asp Glu Asp Asn Asn Asn Asn Asn Asn Asn  
 35 40 45  
 Asn Asn Asn Ser Asn Ile Ser Asn His Met Asn Glu Phe Asp Leu Glu  
 50 55 60  
 Glu Glu Asp Glu Asp Asp Tyr Glu Asp Glu Asn Tyr Ile Val Gly Glu  
 65 70 75 80  
 Thr Ile Glu Ile Asp Glu Ser Lys Leu Lys Asn Glu Lys Ile Glu Glu  
 85 90 95  
 Asp Ile Phe Asn Glu Asn Asn Leu Leu His Gly Ile Lys Thr Arg Glu  
 100 105 110  
 Leu Leu Glu Gln Glu Ile Leu Ile Leu Phe Ser Asn Met Leu Lys Lys  
 115 120 125  
 Glu Thr Ile Leu Cys Lys Asp Ile Lys Ser Gly Ser Asn Asp Pro Met  
 130 135 140  
 Asp Glu Ile Ser Leu Phe Lys Asp Asp Met Val Asp Asp Lys Glu Leu  
 145 150 155 160  
 Lys Asp Phe Glu Lys Ser Ser Leu Lys Ile Lys Asn Lys Glu Val Tyr  
 165 170 175  
 Asn Phe Ile Tyr Asn Lys Met Asn Leu His Ile Lys Glu Asn Lys Lys

186

Phe Ser Asn Asp His Thr His Phe Ser Asn Asp His Thr His Phe Ser  
 565 570 575  
 Asn Asp His Thr His Asn Ser Asn Asp His Thr His Asn Ser Lys Asn  
 580 585 590  
 His Ala His Phe Ser Asn Glu Val Asp Lys Thr Asn Asp Tyr Lys Tyr  
 595 600 605  
 His Ser Glu Lys Lys Lys Lys Asn Asn Val Ile Arg Ser Lys Met Tyr  
 610 615 620  
 Asn Ile Lys Lys Arg Ile Ser Lys Ile Asn Asp Glu Leu His Glu Leu  
 625 630 635 640  
 Ser Asn Phe Phe Leu Ile Asp Lys Thr Lys Arg Glu Lys Leu Met Phe  
 645 650 655  
 Glu Tyr Asn Glu Asn Val Phe Leu Val Arg Asn Ile Leu Thr Gln Val  
 660 665 670  
 Leu Gly Ile Arg Asn Lys Thr Asp Asn Arg Asp Ile Asn Leu Asn Asn  
 675 680 685  
 Val His Tyr Ala Ile Leu Gln Asn Ile Leu Asp Lys His Gly Cys Leu  
 690 695 700  
 His Leu Ile Ile Asp Glu Met Arg Asp Leu Phe Glu Lys Glu Ile Lys  
 705 710 715 720  
 Lys Tyr Glu Glu Glu Ser Asn Ile Tyr Ile Pro Tyr Ile Lys Gln Asn  
 725 730 735  
 Thr Met Lys Gln Ile Trp Glu Tyr Ile Arg Leu Phe Tyr Asn Ile Ile  
 740 745 750  
 Cys Tyr Ile Asp Pro Ile Asp Leu Val Lys Ser Leu Thr Tyr Gln Lys  
 755 760 765  
 Ser Thr His Ile Ile Lys Lys Glu Lys Lys Lys Thr Lys Thr Asp Met  
 770 775 780  
 Asp Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asp Asn Asn Asn  
 785 790 795 800  
 Ile Met Met Asn Gln Lys Phe Leu Asn Asn Tyr His Asn Lys Lys His  
 805 810 815  
 Leu Asn Thr Ser Asp Asn Val Asn Asn Met Lys Thr Asn Asn Leu Arg  
 820 825 830  
 Asn Tyr Asn Lys Asp Ile Asn Leu Lys Asn Val Gly Lys Asp Met Asn  
 835 840 845  
 Lys Arg Lys Ser Met Ala Gln Gln Gln Asn Lys Arg Lys Ser Asn Tyr  
 850 855 860  
 Ile Asn Ile Lys Gln Lys Asn Leu Met Ile Thr His Leu Ser Arg Ile  
 865 870 875 880  
 Asn Pro Leu Leu Ala Lys Ser Lys Val Arg Lys Pro Asn Glu Glu Lys  
 885 890 895  
 His Leu Lys Lys Arg Lys Arg Lys Phe Ile Glu Arg Lys Asn Leu Ile  
 900 905 910  
 Asp His Tyr Glu Ile Phe Ser Phe Glu Asp Phe Ser Phe Asn Met Phe  
 915 920 925

Ser Glu Asp Arg Leu Phe Asn Lys Tyr Asn Ile Leu Asp Ile Phe<sup>1188</sup> Asp  
 930 935 940  
 Tyr Ser Asn Leu Tyr Lys Ile Gln Asp Phe Leu Asn Asn Ile Ile Gly  
 945 950 955 960  
 Ile Asn Glu Glu Phe Glu Ser Ile Tyr Glu Asn Asp Asp Asn Phe His  
 965 970 975  
 Tyr Ser Leu Lys Val Phe Leu Asn Ile Cys Ile Lys Asp Leu Arg Arg  
 980 985 990  
 Cys Ile Asn Glu Phe Tyr Asn Phe Gln Trp Asp Ile Lys Ile Ile Leu  
 995 1000 1005  
 Asn Met His Ala Trp Ile Val Thr Tyr Tyr Thr Asn Leu Tyr Ile Tyr  
 1010 1015 1020  
 Glu Asn Arg Lys Arg Phe Tyr Asn Ser Arg Asn Lys Asn Lys Asn Asn  
 1025 1030 1035 1040  
 Lys Glu His Gln Met Asn Arg Asp Asp Glu Arg Lys Cys Thr Lys Glu  
 1045 1050 1055  
 Tyr Thr Asn Gln Asn Glu Gly Glu Met Lys Tyr Asp His Asn Arg Lys  
 1060 1065 1070  
 Arg Glu Asp Glu Gln Lys Asn His Lys Tyr Cys Asn Ile Asn Cys Asn  
 1075 1080 1085  
 Ile Asn Cys Asn Ile Asn Cys Asn Lys Asn Cys Asn Lys Asn Cys Asn  
 1090 1095 1100  
 Ile Asn Tyr Asn Asn Gly Asp Asn Asn Val Tyr Asp Asn Asn Val Tyr  
 1105 1110 1115 1120  
 Asp Asn Asn Asp Asp Tyr Asn Asp Asp Tyr Asn Asp Asp Tyr Asn Asp  
 1125 1130 1135  
 Asp Tyr Asn Asp Asp Tyr Asn Asp Val Asn Gln Asn Thr Tyr Val Lys  
 1140 1145 1150  
 His Asn Asn Gln Asn Glu Asn Ser Ser Leu Phe Ile Ser Arg Ile Gln  
 1155 1160 1165  
 Met Val Leu Gly Leu Gln Met Tyr Ile Gly Asp Asn Ser Ile His Ser  
 1170 1175 1180  
 Glu Phe Leu Cys Asp Thr Phe Gln Arg Val Ile Arg Glu Glu Lys Met  
 1185 1190 1195 1200  
 Met Lys Asn Ser Ser Gln Val Ile Leu Cys Cys Leu Arg Cys Leu Tyr  
 1205 1210 1215  
 Ser Asp Leu Asn Leu Leu Asp Ile His Ser Leu Ser Thr Asp Glu Asn  
 1220 1225 1230  
 Val Lys Ser Ile Cys Lys Thr Ser Leu Asp Asn Leu Leu Lys Arg Asn  
 1235 1240 1245  
 Ile Leu Thr Thr Leu Ser Trp Ile Leu Gln Asn Phe Lys Ile Leu Ser  
 1250 1255 1260  
 His Glu Lys His Ile Phe Ile Tyr Ser Leu Lys Cys Ser Leu Leu Ile  
 1265 1270 1275 1280  
 Ile Asn Leu Leu Ala Lys Leu Gly Gly Thr Thr Tyr Ile Ile Lys Glu  
 1285 1290 1295  
 Lys Lys Asn Ile His Asn Asp Ser His Asp Asp Asn Asn Asp Asp Ser



1300										1305					1310				
Val	Asn	Asp	Ser	Asn	Asp	Asp	Thr	Asn	Asn	Val	Asn	Val	Asn	Val	Asn				
1315										1320					1325				
Val	Asn	Asp	Tyr	Tyr	Asp	Asp	Asp	Asp	Asp	Asp	Asn	Asn	Asn	Asn	Asn				
1330										1335					1340				
Arg	Ile	Asp	Lys	Lys	Lys	Lys	His	Lys	Lys	Lys	Lys	Tyr	Asn	Asn	Glu				
1345										1350					1355				
Pro	Met	Glu	Lys	Ile	Asp	Val	Ser	Asp	Leu	Val	Glu	Glu	Ile	Phe	Asn				
1365										1370					1375				
Gly	Lys	Ile	Val	Asn	Ile	Cys	Met	His	Ile	Leu	Glu	Asn	Phe	Lys	Arg				
1380										1385					1390				
Asn	Ser	Leu	Tyr	Ile	Asn	Asp	Leu	Ile	Ile	Thr	Tyr	Phe	Glu	His	Leu				
1395										1400					1405				
Ile	Lys	His	Lys	Asn	Asn	Glu	Tyr	Asn	Phe	Leu	Ile	Phe	Phe	Asp	Ile				
1410										1415					1420				
Lys	Tyr	Phe	Leu	Ile	Phe	Lys	Asp	Ile	Ile	Asn	Asp	Pro	Glu	Ala	Tyr				
1425										1430					1435				
Asn	Asn	Pro	His	Tyr	Tyr	Trp	Ile	Pro	Cys	Phe	Phe	Glu	Asn	Ile	Ile				
1445										1450					1455				
Ala	Cys	Phe	Phe	Lys	Ile	Trp	Lys	Ser	Asn	Tyr	Phe	Ile	Val	Asn	Glu				
1460										1465					1470				
Leu	Leu	Phe	Thr	Lys	Asp	Ile	Asn	Lys	Asn	Asn	Ser	Asn	Leu	Leu	Asn				
1475										1480					1485				
Glu	Lys	Tyr	Leu	Leu	Ser	Ile	Phe	Ser	Asn	Tyr	Asn	Glu	Gly	Asn	Asp				
1490										1495					1500				
Pro	Phe	Ile	Phe	Gln	Gln	Leu	Asn	Glu	Gly	Ile	Tyr	Ile	Asn	Asp	Ile				
1505										1510					1515				
Phe	Ile	Asn	Leu	Asn	Asn	Lys	Lys	Arg	Leu	Glu	Ser	Leu	Glu	Trp	Ser				
1525										1530					1535				
Asn	Glu	Asp	Ile	Glu	Asn	Leu	Lys	Phe	Tyr	Phe	Lys	Gln	Phe	Lys	His				
1540										1545					1550				
Met	His	Asn	Phe	Leu	Pro	Phe	Ile	Ser	Glu	Met	Leu	Asn	Lys	Ser	Ser				
1555										1560					1565				
Asn	Val	Val	Lys	Asn	Gln	Leu	Ile	Tyr	Leu	Asn	Tyr	Leu	Asp	Lys	Arg				
1570										1575					1580				
Gly	Lys	Val	Ile	Tyr	Asp	Asp	Gln	Tyr	Glu	Ser	Asp	Asn	Met	Ile	Ser				
1585										1590					1595				
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Leu	Ser			
1605										1610					1615				
Ser	Ser	Ser	Ser	Leu	Ser	Cys	Val	Ser	Tyr	Leu	Ser	Glu	Ala	Gln	Asn				
1620										1625					1630				
Ser	Asn	Asn	Lys	Ser	Asn	Asp	Ser	Leu	Lys	Met	Ser	Tyr	Ser	Lys	Lys				
1635										1640					1645				
Lys	Lys	Gln	His	Thr	Asn	Glu	His	Met	Asn	His	His	Gln	Asn	Tyr	Pro				
1650										1655					1660				
Met	Arg	Lys	Thr	Lys	Gln	Pro	Leu	Leu	Tyr	Ile	Ile	Tyr	Lys	Leu	Lys				
1665										1670					1675				

Lys Leu Asn Tyr Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 1685 1690 1695  
 Asn Asp Asp Asn Thr Lys Asp Gln Pro Lys Leu Thr Val Asn Glu Ile  
 1700 1705 1710  
 Asn Cys Asn Val Asp Thr Val Leu Glu Glu Ile Asn Val Asn Leu Lys  
 1715 1720 1725  
 Ser Leu Tyr Glu Leu Lys Lys Leu Ser Lys Asn Lys Ile Phe Asn Asn  
 1730 1735 1740  
 Lys Ala Leu Ala Phe Asp Ile Pro Leu Ser Ile Ser Pro Asp Leu Leu  
 1745 1750 1755 1760  
 Glu His His Tyr Phe Lys Lys Leu Leu Lys His Ile Gly Phe Leu Tyr  
 1765 1770 1775  
 Asn Gln Asn Val Asp Glu Trp Ile Leu Asn Glu Asn Leu Asp Ile Asp  
 1780 1785 1790  
 Ile Phe Lys Lys Thr Ile Asp Lys Phe Glu Gln Leu Tyr Ile Met Asp  
 1795 1800 1805  
 Ile Gln Lys Leu Lys Lys Lys Lys Leu Ser Ser His Lys Leu Asn Val Gln  
 1810 1815 1820  
 Thr Asn Asp Gln Gly Glu Arg Gln Asp Glu Arg Asn Ile Asp His Glu  
 1825 1830 1835 1840  
 Asp Glu Pro Val Ser Ser Asn Thr Glu Asp Asp His Glu Glu Asn Asp  
 1845 1850 1855  
 Tyr Phe Thr Tyr Asp His Ile Asp Glu Arg Asp His Lys Lys Cys Asp  
 1860 1865 1870  
 Asp Lys Lys Tyr Ser Asp Asn Thr Asn Glu Thr Tyr Asp Asp Gln Lys  
 1875 1880 1885  
 Cys Asp Asp Asn Thr Asn Glu Thr Tyr Asp Asn Glu Lys Cys Asp Glu  
 1890 1895 1900  
 Ala Ile Asn Asn Lys His Met Asp Glu Gln Glu Leu His Leu Arg Ser  
 1905 1910 1915 1920  
 Pro Ser Ile Lys Thr Lys Gly Thr Leu Lys Leu Leu Lys Leu Met Tyr  
 1925 1930 1935  
 Glu Phe Phe Ile Ser Asn Asp Asp Glu Cys Arg Leu Phe Phe Asn Asn  
 1940 1945 1950  
 Leu Ile Asn Thr Ile Lys Glu Lys Cys Ile Ile Ile Phe Glu Lys Leu  
 1955 1960 1965  
 Lys Lys Cys Lys Leu Asp His Asp Ile Leu Tyr Lys Asp Thr Thr Asn  
 1970 1975 1980  
 Asn Tyr Tyr Asp His Thr Ser His Pro Val Gln Ile Cys Phe Glu Asp  
 1985 1990 1995 2000  
 Tyr Lys Ile Tyr Leu Asn Asn Asn Glu Lys Ser Ile Leu Lys Gly Arg  
 2005 2010 2015  
 Cys Lys His Lys Asn Ile Leu Glu Glu Leu Leu Glu Ile Leu Gly Leu  
 2020 2025 2030  
 Tyr Ile Ser Asn Val Pro Cys Leu Ile Ile Ser Lys His Ile Lys Glu  
 2035 2040 2045

Glu Glu Phe Tyr Glu Arg Ile Thr Thr Ile Asn Asp His Lys Thr Leu  
 2050 2055 2060  
 Ser Leu Asn Asp Leu Asn Met Ile Ile Thr Thr Lys Glu Lys Glu Ile  
 2065 2070 2075 2080  
 Lys Glu Lys Lys Lys Lys Lys Lys Glu Glu Arg Lys Pro Ser Ala His  
 2085 2090 2095  
 Gln Lys Phe Ala Phe Ile Lys Ser Ile Cys Glu Tyr Leu Asn Tyr Asn  
 2100 2105 2110  
 Tyr Ile Ile Arg Asn Thr Tyr Lys Ser Glu Gln Asn Thr Asn Asn His  
 2115 2120 2125  
 Asn Asp Asn Asn Ile Ile Tyr Asn Asn Thr Tyr Ser Lys Leu Lys Asp  
 2130 2135 2140  
 Thr Tyr Phe Gly Asp Asp Lys Leu Leu Thr Ala Leu Tyr Asp Lys Leu  
 2145 2150 2155 2160  
 Asn Ile Trp Asn Asn Arg Arg Lys Lys Lys Asn Asp Asp Met Val Leu  
 2165 2170 2175  
 Glu Ile Pro Ile Pro Gln Phe Val Gly Ser Met Cys Asn Val Gly Thr  
 2180 2185 2190  
 Ser Glu Gly Glu His Glu Gln Lys Leu Asp Glu Ser Lys Asn Ile Tyr  
 2195 2200 2205  
 Thr Lys Glu Tyr Asn Asn Asp Glu Lys Phe Leu Lys Ser His Ile Asn  
 2210 2215 2220  
 Cys Gln Asp Asp Thr Gln Lys Ile Ser Ser Leu Val Ile His Ile Gly  
 2225 2230 2235 2240  
 Ile Cys Leu Lys Gly Glu Tyr His Asp Glu Ser Ile Leu Lys Trp Thr  
 2245 2250 2255  
 Cys Glu Gln Ile His Arg Glu Trp Met Lys Ile Met Leu Lys Leu Phe  
 2260 2265 2270  
 Tyr Asn Ile Leu Tyr Asp Thr Thr Tyr Asn Val Ile Gly Lys Leu Phe  
 2275 2280 2285  
 Lys Glu Tyr Lys Asn Ile Lys Glu Ile Leu Asn Asp Gln Ser Ser Asp  
 2290 2295 2300  
 Phe Leu Asp Met Tyr Lys Ser Asp Lys Lys Lys Lys Lys Lys Lys  
 2305 2310 2315 2320  
 Glu Leu Asp Asp Val Glu Lys Glu Gly Gln Pro Lys Met Gly Val Gly  
 2325 2330 2335  
 Asn Asp Asp Asn Ile Asn Gly Asp Lys Asn Ile Tyr Asp Asp Asn Ile  
 2340 2345 2350  
 Asn Gly Asp Asp Asn Ile Asn Gly Asp Lys Asn Ile Tyr Asp Asp Asp  
 2355 2360 2365  
 Lys Asn Ile Tyr Asp Asp Asp Asp Asn Ile Asn Gly Asp Lys Asn Ile  
 2370 2375 2380  
 Tyr Asp Gly Asn Tyr Lys Ile Ser Tyr Ser Lys Glu Tyr Glu His Ile  
 2385 2390 2395 2400  
 His Met Asp Glu Lys Lys Glu Val Glu Lys Glu Tyr His Ile Tyr Asp  
 2405 2410 2415  
 Asn Asn Asn Asn Asn Asp Asn Asn Asn Asp Asn Asn Asn Asp Asn Asn

2420                      2425                      2430  
 Asn Asn Ser His Thr Leu Ala Phe Gln Asn Arg Thr Gln Gly Glu Thr  
       2435                      2440                      2445  
 Thr Phe Thr Asn Ile Asn Asn Ile Thr Asn Asp Ile Cys Glu Lys Gly  
       2450                      2455                      2460  
 Asn Lys Tyr Thr Ser Asn Val Asn Asn Ile Asn Asn Ile Asn Glu Met  
       2465                      2470                      2475                      2480  
 Thr Cys Lys Glu Ser Val Glu Val Asn Glu Ile Ile Gln Lys Thr Asn  
                              2485                      2490                      2495  
 Lys Arg Lys Phe His Asn Ile Glu Leu Lys Glu His Tyr Cys Tyr Asp  
                              2500                      2505                      2510  
 Leu Phe Lys Lys Arg Lys Leu Glu Asn Thr Tyr Arg Asn Thr Tyr Lys  
                              2515                      2520                      2525  
 Lys Asn Arg Lys Ile Ile Ile Asn Cys Leu Leu Thr Asn Lys Asn Ile  
                              2530                      2535                      2540  
 Phe Gln Tyr Lys Glu His Asp Ile Val Asn Lys Val Lys Gln Ile Phe  
       2545                      2550                      2555                      2560  
 Ile Lys Ala Lys His Met Ala Thr Asn Gly Val Arg Lys  
                              2565                      2570

<210> 92  
 <211> 457  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 92  
 Met Lys Lys Glu Asn Thr Ser Leu Leu Ser Ser Arg Tyr Arg Ile Ile  
       1                      5                      10                      15  
 Leu Gly Gly Phe Leu Ile His Cys Thr Leu Gly Ser Ile Tyr Cys Phe  
                              20                      25                      30  
 Ser Asn Ile Ser Val Tyr Val Ile Ser Tyr Met Lys Ile Ile Gly Cys  
                              35                      40                      45  
 Ser Asp Val Lys Tyr Lys Asp Ser Ser Trp Ile Tyr Val Leu Thr Leu  
                              50                      55                      60  
 Leu Phe Gln Cys Phe Phe Gly Phe Phe Gly Gly Ile Leu Asn Gln Asn  
       65                      70                      75                      80  
 Leu Gly Pro Gln Ile Ser Val Leu Leu Gly Gly Trp Leu Met Cys Leu  
                              85                      90                      95  
 Gly Ile Leu Leu Ser Tyr Phe Thr Val Phe Asn Phe Tyr Leu Phe Leu  
                              100                      105                      110  
 Met Thr Tyr Gly Ile Leu Cys Gly Ile Gly Cys Gly Ile Ala Tyr Pro  
                              115                      120                      125  
 Ile Pro Leu Ser Val Ala Val Lys Lys His Tyr Asp Tyr Lys Gly Val  
                              130                      135                      140  
 Ile Ser Gly Ile Ile Phe Ile Gly Arg Gly Leu Ser Val Phe Ile Ile  
       145                      150                      155                      160  
 Cys Pro Leu Gln Asn Tyr Tyr Ile Asn Lys Tyr Asn Tyr Met Pro Asp  
                              165                      170                      175  
 Tyr Met Pro Glu Ile Glu Asn Ser Asp Glu Lys Tyr Phe Ser Asn Leu

180 185 190

Asp Ile Leu Asn Lys Val Pro Tyr Leu Phe Ile Tyr Glu Gly Ile Cys  
195 200 205

Phe Ala Ile Ile Gln Phe Leu Gly Ser Tyr Leu Ile Ala Asp Ser Gly  
210 215 220

Asp Thr Ser Lys Asp Phe Met Ala Tyr Asn Asp Arg Asn Asn Lys Val  
225 230 235 240

Leu Tyr Phe Glu Glu Lys Asn Phe Ile Asn Lys Pro Asn Gly Leu Ser  
245 250 255

Asn Ser Leu Arg Thr Leu Ser Asn Thr Ser Asn Phe Ser Phe Arg Glu  
260 265 270

Val Asn Asn Thr Phe Ile Asn Arg Glu Phe Ile Leu Ile Trp Leu Met  
275 280 285

Ile Phe Phe Asn Trp Gln Ala Ile Ser Tyr Thr Gln Val Phe Trp Lys  
290 295 300

Ile Phe Gly Met Asn Tyr Leu Ser Ile Asp Asp Arg Ser Leu Ser Leu  
305 310 315 320

Leu Gly Ser Val Ser Ser Leu Phe Asn Ile Phe Gly Arg Ile Phe Trp  
325 330 335

Gly Leu Ile Ser Asp Phe Thr Ser Phe Lys Thr Thr Leu Ile Leu Met  
340 345 350

Ser Leu Leu Met Ser Phe Leu Thr Ile Thr Leu Thr Met Ser Gly Phe  
355 360 365

Tyr Gly Ile Ile Thr Tyr Ser Ile Trp Val Cys Leu Ile Phe Phe Cys  
370 375 380

His Ala Gly Thr Phe Ala Ile Phe Pro Ser Ile Thr Ala His Thr Phe  
385 390 395 400

Gly Thr Lys Asn Phe Gly Pro Val Phe Gly Leu Leu Phe Thr Ala Arg  
405 410 415

Ala Phe Ser Ser Ile Ile Asn Ala Ile Ile Ser Ala Val Leu Leu Asn  
420 425 430

Asn Ile Gly Asn Ile Ala Met Cys Ala Ile Val Ser Leu Ser Ser Phe  
435 440 445

Val Ser Ile Met Leu Ala Leu Ala Phe  
450 455

<210> 93  
 <211> 1346  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 93  
 Met Lys Lys Lys Tyr Val Phe Leu Thr Lys Glu Ile Asn Val Phe Lys  
1 5 10 15  
 Tyr Val Thr Ile Asn Asp Glu Ile Arg Lys Tyr Ile Leu Arg Cys Thr  
20 25 30  
 Ser Phe Asn Asn Asn Gly Cys Asn Asn Gln Phe Ile Lys Lys Leu His  
35 40 45  
 Phe Tyr His Thr Tyr Val Pro Thr Phe Tyr Ser Tyr Leu Lys Lys Leu

50

55

60

Glu Ile Lys Lys Lys Cys His Ile Tyr Asn Glu Asn Asn Asn Ile Val  
 65 70 75 80  
 Ile Tyr Lys Arg Leu Ile Cys Ile His Lys Asn Lys Lys Glu Tyr His  
 85 90 95  
 Val Asn Ile Asn Glu Val Pro Ile Asn Asn Glu Asp Gly Lys Asp Asn  
 100 105 110  
 Lys Val Asn Ile Lys Glu Asn Asn Lys Met Tyr Arg Asn Ser Lys Asp  
 115 120 125  
 His Ile His Lys Lys Lys Asn His Val Lys Ile Asn Tyr Asn Lys Ile  
 130 135 140  
 Leu Ile Gln Thr Asn Glu Gln His Lys Lys Ser Lys Ile Glu Asp Lys  
 145 150 155 160  
 Trp Asn Glu Asn Ser His Val Arg Glu Asp Glu Ile Tyr Leu His Val  
 165 170 175  
 Asn Asn Leu Cys Lys Lys Ile Tyr Tyr Leu Ser Lys Asn Lys Ile Lys  
 180 185 190  
 Asp Glu Asn Leu Trp Lys His Tyr Leu Ile Gln Tyr Tyr Lys Glu Asn  
 195 200 205  
 Lys Asn Tyr Asp His Ile Lys Ile Lys Asn Ile Phe Met Leu Leu Leu  
 210 215 220  
 Gly Ile Thr Asn Ser Asn Lys His Ile Lys Asp Met Ile Ile Val Ile  
 225 230 235 240  
 Asn Asp Glu Glu Lys Ile Asn Glu Lys Gly Lys Lys Lys Lys Asn Ile  
 245 250 255  
 Lys Ile Ile Glu Ile Val Tyr Asn His Leu Asp Ile Leu Ser Lys Lys  
 260 265 270  
 Ile Asn Gln Met Thr Asn Asn Gln Leu Ser Ile Phe Leu Tyr Ile Leu  
 275 280 285  
 Glu Lys Trp Asn Met Ile Asp Asn Tyr Lys Asp Ile Thr Asn Glu Ile  
 290 295 300  
 Asn Phe Lys Ile Leu Asn Gln Thr Ser Leu Lys Lys Val Asn Ile Lys  
 305 310 315 320  
 Cys Phe Leu Asn Val Leu Tyr Ile Tyr Ser Lys Asn Tyr Glu Gln Asn  
 325 330 335  
 Val Asn Lys Asn Asn Asn Asn Glu Asn Lys Asn Asn Lys Asn Asn Asn  
 340 345 350  
 Ser Asn Asn Asn Asn Asn Ile Cys Lys Glu Gln Lys Cys Val Ile Thr  
 355 360 365  
 Lys Asp Lys Ile Lys Ile Phe Ile Asn Lys Phe Gly Lys Gln Lys Phe  
 370 375 380  
 Arg Ile Glu Asp Ile Leu Tyr Leu Leu Ser Ser Met Tyr Lys Leu Lys  
 385 390 395 400  
 Ile Lys Asn Lys Ser Ile Leu Asn Asn Ile Ile Gln Tyr Leu Asn Ile  
 405 410 415  
 Gln Asn Val Ile Lys Asp Ser Asn Tyr Phe Leu Ile Pro Ser Leu Leu  
 420 425 430

Leu Ser Leu Ala Asn Leu Asn Ile Tyr Asp Gln Gln Leu Tyr Leu Asn  
 435 440 445  
 Phe Lys Asn Val Ile Met Glu Asn Tyr Tyr Phe Tyr Asn Ser Ile His  
 450 455 460  
 Phe Thr Asn Leu Phe Tyr Ser Phe Ala Lys Phe Lys Pro Asp Tyr Val  
 465 470 475 480  
 Gln Glu Leu Phe Glu Lys Ile Ala Thr His Ile Met Met His Thr Asn  
 485 490 495  
 Asn Ser Ser Thr Asp Asn Asn Lys Ser Thr Pro Glu Thr Gln Ile Ile  
 500 505 510  
 Leu Lys Gly Lys Glu Lys Glu Ile Asn Asn Asn Pro Asn Leu Lys Asn  
 515 520 525  
 His Lys Asn Asn Asp Phe Phe Glu Asn Asp Asp Lys Tyr Thr Ile Asn  
 530 535 540  
 Asn Lys Met Val Asp Gln Thr Asn Asn Asn Thr Phe Asn Ile Phe Gln  
 545 550 555 560  
 Ile Thr Asn Ile Ile Asn Ser Cys Leu Lys Cys Asn Tyr Val Asn Tyr  
 565 570 575  
 Asp Phe Phe Ser Tyr Leu Leu Lys Gln Gly Asn Leu Phe Met Asp Asn  
 580 585 590  
 Ser Glu Pro Leu Asp Asn Leu Ile Asn Val Leu Asn Cys Val Ser Asn  
 595 600 605  
 Ile Leu Lys His Phe Asn Val Phe Lys Tyr Lys Leu Tyr Phe His Tyr  
 610 615 620  
 Glu Lys Lys Glu Lys Asn Gln Trp Gln Gln Glu Asn Trp Leu Val His  
 625 630 635 640  
 Asn Asp Leu Thr Cys Ser Gly Lys Asn His Glu Asn Ser Arg Asn Lys  
 645 650 655  
 Ile Ala Asn Trp Gln Asn Lys Ile Glu His Asn Asn Leu Asp Asn Lys  
 660 665 670  
 Asn Asn Asn Met Asp Phe Asn Asn Met Met Thr Ser Pro Leu Tyr Tyr  
 675 680 685  
 Tyr Tyr Tyr Tyr Tyr Tyr Asp Asn Asp Pro Ser Lys Gly Tyr Cys Asn  
 690 695 700  
 Leu Phe Glu Ile Leu Tyr Gly Tyr Asn Ser Gly Tyr Asn Leu Tyr Thr  
 705 710 715 720  
 Ser Phe Ser Ser Leu Ser Tyr Val Val Lys Tyr Asn Glu Gln Met Phe  
 725 730 735  
 Leu Lys Lys Phe Lys Asp Ser Lys Gln Ser Glu Val Pro His Asn Phe  
 740 745 750  
 Glu Ile His Leu Asp Asn Ile Ser Asp Lys Ile Leu Lys Ile Ile Glu  
 755 760 765  
 Gln Asn Leu Asn His Glu Asn Met Lys Tyr Ile Ile His Asn Leu Met  
 770 775 780  
 Ile Ser Leu Ser Leu Cys Asp Ile Lys Tyr Leu Asn Leu Tyr Ala Leu  
 785 790 795 800

Cys Phe Phe Ile Leu Lys Glu Asn Tyr Tyr Tyr Leu Ser Ile Asn Asn  
 805 810 815  
 Leu Tyr Leu Tyr Leu Glu Ile Leu His Arg Met Lys Ile Tyr Asn His  
 820 825 830  
 Asp Ile Phe Tyr Ser Ile Met Glu Tyr Ile Asn Thr His Val His Ala  
 835 840 845  
 Leu Glu Ser Gln Lys Lys Met Lys Ile Phe Leu Leu Ser Tyr Asn Ile  
 850 855 860  
 Phe Gln Lys Met Asp Asn Pro Val Asp Met Lys Glu Met Cys Asp Phe  
 865 870 875 880  
 Phe Leu Ser Ser Asn Asn Lys Ile Glu Lys Glu Asn Gly Asn Asp Asp  
 885 890 895  
 Leu Met Leu Gly Lys Cys Thr His Glu Lys Asn Leu Trp Lys Leu Pro  
 900 905 910  
 Thr Asp Ile Glu Ile Lys Gln Asn Leu Ile Asn Leu Glu Asn Phe Gln  
 915 920 925  
 Lys Glu Leu Leu Ser Asn Asn Asp Asn Asp Lys Met Glu Phe His Asp  
 930 935 940  
 Asn Asn Cys Asn Ile Ile Gly His Asp Lys Phe Phe Ser Asn Asn Asp  
 945 950 955 960  
 Glu Asn Lys Ile Lys Lys Glu Lys Tyr Phe Asn Leu Lys Asn Glu Ile  
 965 970 975  
 Met Val Phe Lys Lys Ile Glu Lys Thr Glu Thr Leu Pro Cys Thr Leu  
 980 985 990  
 Asn Ile Tyr Asp Tyr Ile Asn Phe Leu Leu Ile Leu Ile Phe Tyr Gln  
 995 1000 1005  
 Cys Asn Asn Lys Ile Lys Glu Cys Asp Glu Lys Ile Asn Leu Asn Phe  
 1010 1015 1020  
 Leu Phe Ser Lys Asp Glu Asn Val Ile Ile Thr Ile Gln Asn Glu Met  
 1025 1030 1035 1040  
 Tyr Glu Lys Asn Asn Lys Ile Lys Asn Pro Cys Lys Tyr Val Lys Asn  
 1045 1050 1055  
 Lys Gln Tyr Met Leu Asp Lys Tyr Ser Glu Met Leu Lys Glu Asn Leu  
 1060 1065 1070  
 Phe Asn Ile Glu Ser Ser Leu Ile Gln Leu Phe Ser Ile Phe Val Asn  
 1075 1080 1085  
 Leu Leu Glu Lys Gly Glu Asp Asp Lys Glu Leu Phe Val Asn Gln Ile  
 1090 1095 1100  
 Met Phe Ile Leu Asp Phe Ile Lys Ile Ile Asn Glu Lys Val Tyr Ile  
 1105 1110 1115 1120  
 Asn Ile Met Lys Ile Val Lys Lys Met Lys Asn Tyr Asp Glu Asn Ile  
 1125 1130 1135  
 Lys Arg Lys Asn Tyr Phe Thr Thr Tyr Ser Lys Asn Lys Tyr Phe Gln  
 1140 1145 1150  
 Leu Lys Lys Ile Asp Leu Glu Tyr Ile Asn Ser Asn Ile Asn Asn Lys  
 1155 1160 1165  
 Lys Lys Asn Thr Tyr Asn Asp Phe Phe Phe Asn Glu Asn Asn Ile Asn



1170 1175 1180  
 Tyr Arg Tyr Gln Tyr Gln Ser Val His Lys Ala Ile Gln Leu Phe Ser  
 1185 1190 1195 1200  
 Asp Asn Ile Ile Arg Tyr Ser His Asn Glu Lys Ile Asn Thr His Tyr  
 1205 1210 1215  
 Lys Asn Asn Lys Tyr Ile Ile Lys Asp Ile Lys Thr Phe Tyr Lys Leu  
 1220 1225 1230  
 Asp Asn Phe Leu Ile Ser Asp Ile Leu Leu Ile Leu Glu Lys Gln Asn  
 1235 1240 1245  
 Lys Glu Gln Ile Phe Tyr Phe Leu Leu Phe Tyr Pro Phe Glu Leu Lys  
 1250 1255 1260  
 Gln Thr Val Ile His Ile Lys Asn Asn Thr Phe Leu Phe Asn Tyr Lys  
 1265 1270 1275 1280  
 Tyr Asp Glu Thr Phe Leu Phe Asn Met Glu Ile Leu Phe Leu Tyr Asn  
 1285 1290 1295  
 Phe Leu Lys Asn Lys Phe Ser Glu Lys Thr Cys Ser Phe Ser Ile Ile  
 1300 1305 1310  
 Asp Thr Thr Gln Phe Ile Asp Phe Ser Lys Asn Glu Tyr Thr Asn Gly  
 1315 1320 1325  
 His Thr Asn Glu Phe Tyr Glu His Leu Phe Asn Ser Ile Met Asp Glu  
 1330 1335 1340  
 Glu Asn  
 1345  
 <210> 94  
 <211> 269  
 <212> PRT  
 <213> Plasmodium falciparum  
 <400> 94  
 Met Gln Glu Arg Lys Asn Met Val Val Lys Gln Asn Asn Asn Thr Leu  
 1 5 10 15  
 Arg Leu Glu Val Tyr Lys Lys Gly Thr Leu Lys Asn Thr Phe Phe Gly  
 20 25 30  
 Ser Ala Glu Ile His Ile Tyr Ser Glu Ile Val Lys Lys Leu Phe Pro  
 35 40 45  
 Cys Asn Val Tyr Phe Asn Ile Thr Asn Lys Asn Gln Ile Val Gly Thr  
 50 55 60  
 Ala Cys Leu Ser Phe His Tyr Ile Asn Leu Asp Cys Ile Lys Lys Asp  
 65 70 75 80  
 Asp Gln Ile Tyr Thr Ser Leu Phe Ile Glu Thr Ile Ile Ser Val Gln  
 85 90 95  
 Lys Asn Gln Thr Lys Asn Asn Glu Lys Ile Glu Lys Leu Ile Asp Glu  
 100 105 110  
 Gly Lys Glu His Phe Glu Ala Ile Lys Glu Thr Asp Leu Ser Thr Ser  
 115 120 125  
 Glu Tyr Ile Ile Ile Phe Phe Thr Asn Ile Tyr Lys Leu Ile His Val  
 130 135 140  
 Asp Ile Tyr Ile Tyr Ile Tyr Ile Tyr Met Tyr Ile Phe Phe Phe

145                      150                      155                      160  
 Phe Leu Ala Ile Tyr Lys Asn Ile Ser Asn Leu Val Leu Glu Asp Lys  
                                  165                      170                      175  
 Ile Arg Leu Phe Cys Lys Asn Leu Asn Gly Tyr Leu Leu His Ser Asn  
                                  180                      185                      190  
 Phe Tyr Ile Lys Arg Phe Tyr Asn Lys Tyr Tyr Phe Tyr Leu His Phe  
                                  195                      200                      205  
 Phe Lys Gly Lys Phe Tyr Trp Cys Tyr Tyr Asn Glu Glu Ala Asp Ala  
                                  210                      215                      220  
 Lys Val Lys Lys Lys Lys Lys Ile Tyr Ile Tyr Ile Tyr Ile Tyr Lys  
                                  225                      230                      235                      240  
 Cys Ser Phe Val Leu Met Tyr Tyr Ile Cys Thr Tyr Ser Leu Ser Phe  
                                  245                      250                      255  
 Ile Phe Val Tyr Ile Ser Pro Leu Asn Phe Ile Asp Gly  
                                  260                      265

<210> 95  
 <211> 314  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 95  
 Met Ile Asp Leu Phe Asp His Leu Lys Ser Leu Gly Ile Lys Lys Asn  
   1                                 5                                 10                                 15  
 Lys Gly Asn Ala Lys Asn Met Ile Gln Trp Phe Ile Phe Lys Lys Asp  
                                  20                                 25                                 30  
 Lys Ile Ile Asp Asn Thr Val Asp Leu Asn Glu Glu Thr Ile Leu Asn  
                                  35                                 40                                 45  
 Ile Asp Asn Glu Lys Lys Ser Asp Leu Arg Ile Tyr Val Asp Lys Val  
                                  50                                 55                                 60  
 Asp Ser Ile Lys Met Glu Ile Lys Lys Ile Gln Lys Asn Val Asp Glu  
                                  65                                 70                                 75                                 80  
 Ile Ser Cys Leu Lys Asn Lys Ile Asn Ile Ser Ile Thr Val Glu Gln  
                                  85                                 90                                 95  
 Glu Asn Glu Leu Ser Ile Glu Leu Asn Lys Leu Ile Lys Asp Thr Asn  
                                  100                                 105                                 110  
 Asp Leu Ile Asn Ile Ile Lys Ile Asp Ile Arg Asn Leu Arg Lys Lys  
                                  115                                 120                                 125  
 Tyr Val Leu Arg Ser Lys Glu Ser Phe Tyr Ile Lys Lys Ala Ile Tyr  
                                  130                                 135                                 140  
 Asp Asn Val Ile Asn Ile Phe Lys Lys Ser Leu His Thr Tyr Gln Asp  
                                  145                                 150                                 155                                 160  
 Val Gln Asn Ile Tyr His Asp Gly Met Lys Asp Lys Ile Thr Arg His  
                                  165                                 170                                 175  
 Ile Lys Ile Met Tyr Pro Asn Tyr Ser Asp Glu Asp Ile Ser Thr Phe  
                                  180                                 185                                 190  
 Leu Asn Tyr Asp Asp Ile Asn Thr Gln Asn Leu Val Lys Trp Lys Leu  
                                  195                                 200                                 205  
 Gln Gly His Gln Asp Leu Lys Asn Ala Leu Thr Asp Val Glu Thr Lys

210                      215                      220  
 Tyr Lys Asp Val Lys Thr Leu Glu Lys Ser Val Cys Asp Leu His Gln  
 225                      230                      235                      240  
 Thr Ile Ile Glu Leu Ser Ala Leu Ile Glu Met Asn Asp Glu Ile Ile  
                     245                      250                      255  
 Asp Asn Ile Tyr Asp His Val Asn Asp Ala Gln Tyr Phe Thr Glu Lys  
                     260                      265                      270  
 Ala Asn Val Asp Leu Ile Glu Ala Arg Asn Ile Gln Lys Lys Thr Ser  
                     275                      280                      285  
 Lys Trp Met Phe Tyr Leu Thr Val Thr Ile Ile Ile Leu Ile Leu Ile  
 290                      295                      300  
 Ile Phe Phe Pro Ile Ile Thr Lys Ile Ile  
 305                      310

<210> 96  
 <211> 415  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 96  
 Met Lys Ile Ser Phe Leu Phe Lys Leu Val Cys Ile Tyr Ile Val Ile  
 1                      5                      10                      15  
 Ile Phe Leu Phe Gln Asp Val Arg Cys Ile Lys Thr Lys Lys Ile Val  
                     20                      25                      30  
 Arg Cys Phe Asn Pro Phe Val Arg Thr Lys Thr Ile Lys Lys Lys Val  
                     35                      40                      45  
 Gln Pro Asn Phe Leu Lys Arg Val Ala Leu Asn Leu Lys Ile Pro Gln  
                     50                      55                      60  
 Thr Ile Asn Leu Ile Arg Gly Lys Tyr Asn Leu Leu His Glu Ile Tyr  
 65                      70                      75                      80  
 Val Asn Lys Lys Lys His Ile Phe Asn Val Ile Tyr Lys Asp Ile Ile  
                     85                      90                      95  
 Ser Asn Asn Lys Lys Arg Phe Leu Asn Met Leu Lys Asn Ile Val Lys  
                     100                      105                      110  
 Lys Gln Arg Ser Ile Asn Ile Pro Leu Phe Phe Asn Lys Thr Met His  
                     115                      120                      125  
 Ser Phe His Ser Asn Phe Ile Tyr Tyr Tyr Thr Tyr Phe Tyr Ile Leu  
 130                      135                      140  
 Arg Thr Asp Leu Tyr Leu Arg Thr Leu Lys Lys Phe His Asn Val Leu  
 145                      150                      155                      160  
 Ile Gly Lys Phe Lys Ile Asn Ile Leu Ser Lys Val Ile Asn Ser Leu  
                     165                      170                      175  
 Ser Ala Phe Asp Lys Met Phe Leu Trp Asn Asp Gly Arg Ile Ser Lys  
                     180                      185                      190  
 Ile Leu His Lys Tyr Ile Leu Lys Cys Glu Arg Lys Leu Asn Arg Val  
                     195                      200                      205  
 Ala Asp Glu Cys Phe Leu Asn Ser Pro Leu Cys Asn Asn Asn Thr Ser  
 210                      215                      220  
 Pro Val Lys Arg Lys Lys Arg Thr Trp Phe Cys Ser Asn Asp Asn Val

225

230

235

240

Ile Thr Tyr Asn Asp Phe Asn Asp Gln Val Glu Thr Lys Lys Glu Lys  
 245 250 255  
 Phe Tyr Ile Ser Ala Phe Lys Val Leu Pro Leu Phe Phe Tyr Asn Val  
 260 265 270  
 Phe Asn Ile Asn Phe Tyr Leu Lys Thr Ile Lys Lys Ile Arg Asn Ser  
 275 280 285  
 Ile Asn Thr Asn Ile Arg Leu Tyr Leu Leu Lys Asp Tyr Ile Asn Asp  
 290 295 300  
 Gln Asp Ser Ile Lys Ala Ile Phe Tyr Thr Tyr Lys Thr Phe Phe Gln  
 305 310 315 320  
 Leu Ser Leu Glu Lys Asn Ile Val Ser Leu Phe Arg Val Phe Gln Asp  
 325 330 335  
 Lys Met Ser Ile Glu Gln Lys Phe Glu Thr Thr Leu Ile Asn Asn Met  
 340 345 350  
 Glu Lys Gln Leu Lys Ile Lys Leu Pro Asn Ile Gly Leu Thr Asn Ile  
 355 360 365  
 Thr Asn Leu Ser Leu Ile Leu Phe Lys Leu Phe Ala Asn Lys Ile Thr  
 370 375 380  
 Gln Val Val Phe Tyr Leu Ile Leu Val Tyr Ile Lys Gln Phe Leu Tyr  
 385 390 395 400  
 Ala Arg Arg Lys Phe Leu Lys Asp Ile Tyr Ser Phe Pro Phe Tyr  
 405 410 415

&lt;210&gt; 97

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 97

Met Lys Glu Lys Asn Glu Lys Ile Met Asp Tyr Leu Ser Cys Pro Leu  
 1 5 10 15  
 Asp Asp Val Val Asp Arg Glu Lys Lys Ser Gly Lys Asn Ser Leu Leu  
 20 25 30  
 Lys Ser Ser Ser Thr Lys Lys Ser Asp Tyr Lys Lys Ser Ser Ile Phe  
 35 40 45  
 Ser Lys Lys Arg Asp Ser His Lys Lys Gly Ser Ser Phe Arg Gly Arg  
 50 55 60  
 Arg Ser Gly Phe Ile Asn Arg Lys Ser Gly Ser Phe Lys Lys Pro Tyr  
 65 70 75 80  
 Tyr Asn Asn Arg Leu Ile Asn Lys Asn Tyr Asn Asn Tyr Lys Gly Arg  
 85 90 95  
 Asn Phe His Asn Gly Arg Asp Asn Phe Lys Gly Arg Thr Gly Ser Phe  
 100 105 110  
 Gly Ser Arg Val Phe Asp Asn Arg Lys Gly Ser Phe Lys Lys Arg Phe  
 115 120 125  
 Ile Ser Asn Arg Asn Lys Ser Ser Val Lys Ser Tyr Arg Gly Asn Gly  
 130 135 140  
 Ser Asn Lys Met Gly Arg Lys Ser Phe Asn Lys Ala Pro Thr Ser Arg

200

145                      150                      155                      160  
 Thr Val Val Thr Lys Arg Leu Asn Asn Tyr Lys Thr Val Ser Ala Pro  
                                  165                      170                      175  
 Val Lys Lys Phe Asn Asn Leu Asn Ile Ser Leu Tyr Arg Lys Asn Arg  
                                  180                      185                      190  
 Thr Phe Ala Leu Asn Thr Lys Arg Ser Lys Pro Val Gly Thr Ile Lys  
                                  195                      200                      205  
 Ser Ser Val Pro Arg Lys Arg Ile Lys Lys Gly Leu Lys Lys Gly Ser  
                                  210                      215                      220  
 Leu Lys Ser Lys Thr Arg Lys Ser Thr Ser Gly Ser Lys Phe Lys Pro  
                                  225                      230                      235                      240  
 Leu Asn Lys Tyr Phe Leu Ser Lys Ile Lys Ile Val Thr Ser Leu Asn  
                                  245                      250                      255  
 Lys Ile Pro Ser Pro Leu Lys Glu Gln Lys Asn Thr Glu Val Asn Leu  
                                  260                      265                      270  
 Pro Glu Ser Leu Asn Asn Ala Thr Thr Lys Lys Asn  
                                  275                      280

<210> 98  
 <211> 1121  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 98  
 Met Phe Ala Leu Lys Lys Asn Thr Val Arg Glu Gly Phe Val Asn Ile  
                                  1                      5                      10                      15  
 Cys Phe Ser Tyr Leu Lys Lys Leu Tyr Leu Lys Ser Asn Phe Val Thr  
                                  20                      25                      30  
 Val Asn Leu Asn Tyr Glu Thr Asn Asn Glu Lys Arg Thr Asn Lys Lys  
                                  35                      40                      45  
 Ile Tyr Lys Lys Ser Lys Ala Gln Ser Leu Phe Asp Lys Gly Leu Asn  
                                  50                      55                      60  
 Ile His Asp Lys Leu Ile Leu Phe Lys Asn Leu Pro Lys Tyr Lys Cys  
                                  65                      70                      75                      80  
 Ala Lys Tyr Glu Cys Ile Ser Ala Lys Glu Val Tyr Lys Tyr Leu Leu  
                                  85                      90                      95  
 Asp Glu Tyr Lys Lys Cys Phe Asn Tyr Ile Ser Leu Cys Asp Ile Ile  
                                  100                      105                      110  
 Gln Ser Val Lys Ile Phe Asp Glu Leu Asp Lys Thr Phe Thr Asp Tyr  
                                  115                      120                      125  
 Asn Phe Tyr Ile Glu Val Lys Asn Ile Asp Lys Asn Val Leu Asn Lys  
                                  130                      135                      140  
 Ile Asn Glu Ile Tyr Phe Lys Asn Lys Asp Ile Thr Phe His Arg Arg  
                                  145                      150                      155                      160  
 Glu Ile Leu Gly Lys Ile Cys Asn Lys Ile Met Ser Tyr Ile His Glu  
                                  165                      170                      175  
 Met Asn Gly Asn Glu Leu Ile His Phe Leu Ile Tyr Phe Phe Arg Trp  
                                  180                      185                      190  
 Asn Lys Asn Asp Lys Asn Leu Ile Leu Phe Tyr Asn Tyr Tyr Phe Asn

195					200					205					
Tyr	Val	Phe	Asp	His	Met	Tyr	Leu	Phe	Asn	His	Glu	Ile	Tyr	Lys	Leu
210						215					220				
Leu	Phe	Ile	Phe	Asn	Lys	Tyr	Leu	Asn	Asn	Asn	Ser	Asn	Ile	Pro	Phe
225					230					235					240
Asn	Lys	Asn	Leu	Ile	Gln	Glu	Met	Glu	Phe	Asn	Leu	Tyr	Tyr	Phe	Arg
				245					250					255	
Glu	Ile	Lys	Asn	Glu	Lys	Asn	Tyr	Ile	Ile	Lys	Met	Asn	Lys	Lys	Glu
			260					265					270		
Ile	Tyr	Lys	Lys	Cys	Phe	Ala	Lys	Phe	His	Glu	Asn	Val	Asp	His	Ile
		275					280					285			
Asp	Asn	Glu	Lys	Ile	Leu	Asn	Ile	Leu	Arg	Leu	Tyr	Val	Asp	Asn	Ser
		290					295					300			
Ile	Leu	Asp	Ile	Asp	Ile	Asn	Asn	Lys	Met	Leu	Cys	Asn	Leu	Asn	Asn
305					310					315					320
Asn	Leu	Ile	Asn	Glu	Asn	Ile	Glu	Tyr	Ile	Ser	Lys	Leu	Leu	Asn	Phe
				325					330					335	
Tyr	Cys	Thr	Leu	Ile	Lys	Lys	Gly	Lys	Tyr	Asp	Asn	Asp	Met	Thr	Ile
			340				345						350		
Tyr	Lys	Leu	Lys	Glu	Val	Ile	Lys	Ala	Thr	His	His	Ile	Leu	Cys	Asp
		355					360					365			
Lys	Thr	Lys	Asn	Leu	Glu	Thr	Phe	Cys	Ser	Asp	Ile	Asp	Tyr	Ser	Thr
	370						375					380			
Leu	Leu	Asn	Ser	Leu	Asn	Asn	Lys	Phe	Ile	Leu	Asn	Lys	Ile	Ile	Asp
385					390					395					400
Lys	Asn	Phe	Ile	Leu	Phe	Tyr	Glu	Cys	Leu	Leu	Lys	Ile	Leu	Leu	Asn
				405					410					415	
Ile	Lys	Phe	Val	Asn	Phe	Gln	Ser	Leu	Cys	Ile	Ser	Leu	Ile	Ser	Leu
			420					425					430		
Lys	Asn	Ile	Tyr	Tyr	Asn	Ile	Leu	Arg	Asn	Asn	Val	Tyr	Ile	Val	Asn
		435					440					445			
Asn	Val	Leu	Phe	Asn	Asp	Ile	Met	Lys	Phe	Ser	Leu	Tyr	Leu	Cys	Asn
		450					455					460			
Ile	Phe	Leu	Gly	Lys	Arg	Ile	Lys	Thr	Glu	Asn	Glu	Asn	Ala	Val	Leu
465					470					475					480
Ile	Ile	His	Asn	Asn	Asp	Gln	Thr	Asn	Tyr	Ser	Asn	Lys	Glu	Asn	Ile
				485					490					495	
Lys	Asp	Ile	Ile	Ile	Gln	Lys	Arg	Ile	Lys	Glu	Tyr	Ile	Phe	Tyr	Lys
			500					505					510		
Met	Glu	Asn	Tyr	Lys	Asp	Phe	His	Phe	Lys	Leu	Lys	Asp	Ser	Asp	Leu
		515					520					525			
Leu	Ser	Ile	Lys	Leu	Leu	Ser	Asn	Thr	Phe	Val	Lys	Ile	Asn	Glu	Val
		530					535					540			
Tyr	Asn	Ser	Tyr	Asp	Phe	Tyr	Leu	Leu	Phe	Asn	Asn	Ile	Ser	Cys	Ile
545					550					555					560
Leu	Tyr	Asn	Phe	Leu	Val	Asn	Arg	Asn	Ser	Val	Lys	Lys	Tyr	Lys	Asp
				565				570						575	

Thr Tyr Ile Tyr Ile Leu Asn Asp Leu Ser Phe Val Tyr Lys Tyr Ile  
 580 585 590  
 Lys Asn Asn Asp Arg Thr Lys Lys Lys Lys Asn Phe Phe Leu Leu Ser  
 595 600 605  
 Ser Ser Met Lys Glu Leu Ile Cys Lys Asn Ile Leu Ser Val Ser Asn  
 610 615 620  
 Arg Tyr Ile Lys His Leu His Glu Glu Asp Asn Phe Asp Gln Lys Asp  
 625 630 635 640  
 Gln Tyr Val Cys Ser Leu Thr Phe Leu Asn Asn Leu Phe Phe Asp Lys  
 645 650 655  
 Ile Ile His Phe His Tyr Ile Tyr Asn Leu Trp Cys His Val Tyr Lys  
 660 665 670  
 Thr Tyr Asn Tyr Phe Lys Cys Asn Lys Leu Ile Asn Glu Asp Ile Ile  
 675 680 685  
 Ser Leu Leu Leu Leu Thr Cys Ser Lys Phe Gln Tyr Phe Ile Glu Asn  
 690 695 700  
 Asn Ser Asn Asp Arg Tyr Cys Arg Lys Glu Leu Ile His Leu Lys Tyr  
 705 710 715 720  
 Asn Ile Ile Asp Asp Leu Ile Lys Asn Tyr Leu Asn Thr Tyr Lys Ser  
 725 730 735  
 Ile Ser Ile Asp Asn Ile Ser Lys Ile Phe Ile Ser Leu Ser Asn Ser  
 740 745 750  
 Lys Tyr Thr Cys Glu Val Asn Glu Asn Leu Leu Leu Glu Ser Leu Gln  
 755 760 765  
 Ser Glu Phe Glu Lys Val Thr Lys Thr Ser Lys Lys Gly Gly Ile His  
 770 775 780  
 Met Met Asp Asn Asn Leu Leu Asp Asn Asn Asn Ser Cys Glu Lys Tyr  
 785 790 795 800  
 Glu His Arg Tyr Ile Glu Tyr Lys Lys Glu Asn Leu Phe Ile Asn Leu  
 805 810 815  
 Asn Lys Ile Ile Glu Cys Leu Ile Lys Leu Asn Ile Phe Leu Tyr Leu  
 820 825 830  
 Lys Lys Lys Lys Thr Tyr Leu Tyr Leu Tyr Lys Gln Ser Leu Cys Pro  
 835 840 845  
 Ile Asn Leu Lys Glu Asn Ile Leu Lys Lys Ile Leu Tyr Ile Ala Asn  
 850 855 860  
 Asn Leu Tyr Met Tyr Glu Met Tyr Gly Tyr Val Cys Glu Met Leu Glu  
 865 870 875 880  
 Arg Val Leu Ser Ser His Lys Glu Gln Asn Leu Phe Ser Tyr Asn Tyr  
 885 890 895  
 Asn Lys Asn Val Glu His Lys Met Phe Asp Lys Ile Leu Cys His Ile  
 900 905 910  
 Ser Glu Asp Asp Tyr Ile Glu Met Ser Asn Thr Met Tyr Val Leu Phe  
 915 920 925  
 Tyr Asp Tyr Leu Lys Asn Ile Asn Ser Glu Arg Gln Ser Asn Ile Leu  
 930 935 940

Arg Asn Asn Ser Thr Asn Asp Arg Phe Ile Asp Glu Ile Lys Glu Lys  
 945 950 955 960  
 Lys Tyr Lys Leu Asn Asn Asn Thr Leu Ile Lys His Asn Asn Val Lys  
 965 970 975  
 Leu Asn Tyr Glu Lys Ser Asn Asn Ser Asn Gly Asn Ile Ser Asn Ile  
 980 985 990  
 Leu Lys Asp Asp Lys Asn Lys Asn His Asn Asn Val Glu Met Asp Leu  
 995 1000 1005  
 Ile Asp Asn Lys Asn Glu Asn Lys Lys Ile Gln Glu Lys Gly Gln Asn  
 1010 1015 1020  
 Gly Glu Asn Cys Glu Asn Cys Lys Asp Val Leu Val Asn Asp Ile Ile  
 1025 1030 1035 1040  
 Asn Ile Phe Gly Phe Leu Lys Met Glu Lys Lys Lys Phe Leu Phe Phe  
 1045 1050 1055  
 Gln Leu Tyr Met Tyr Leu Cys Asn Ile Thr Lys Phe Lys Arg Arg Tyr  
 1060 1065 1070  
 Val Ser Ser Ser Ser Leu Phe His Met Asp Val Phe Lys Ile Ile Lys  
 1075 1080 1085  
 Asp Met Asn Leu Lys Tyr Leu Cys Leu Glu Asn Tyr Lys Ile Lys Asn  
 1090 1095 1100  
 Glu Glu Cys Ala Phe Leu Tyr Thr Ile Asp Ile Val Leu Phe Lys Glu  
 1105 1110 1115 1120

Arg

<210> 99  
 <211> 235  
 <212> PRT  
 <213> Plasmodium falciparum

&lt;400&gt; 99

Met Glu Lys Lys Ser Ser Tyr Lys Thr Val Leu Leu Gly Glu Ser Ser  
 1 5 10 15  
 Val Gly Lys Ser Ser Ile Val Leu Arg Leu Thr Lys Asp Thr Phe His  
 20 25 30  
 Glu Asn Thr Asn Thr Thr Ile Gly Ala Ser Phe Cys Thr Tyr Val Val  
 35 40 45  
 Asn Leu Asn Asp Ile Asn Ile Lys Asn Asn Ser Asn Asn Glu Lys Asn  
 50 55 60  
 Asn Asn Ile Asn Ser Ile Asn Asp Asp Asn Asn Val Ile Ile Thr Asn  
 65 70 75 80  
 Gln His Asn Asn Tyr Asn Glu Asn Leu Cys Asn Ile Lys Phe Asp Ile  
 85 90 95  
 Trp Asp Thr Ala Gly Gln Glu Arg Tyr Ala Ser Ile Val Pro Leu Tyr  
 100 105 110  
 Tyr Arg Gly Ala Thr Cys Ala Ile Val Val Phe Asp Ile Ser Asn Ser  
 115 120 125  
 Asn Thr Leu Asp Arg Ala Lys Thr Trp Val Asn Gln Leu Lys Ile Ser  
 130 135 140

204



Ser Asn Tyr Ile Ile Ile Leu Val Ala Asn Lys Ile Asp Lys Asn Lys  
 145 150 155 160  
 Phe Gln Val Asp Ile Leu Glu Val Gln Lys Tyr Ala Gln Asp Asn Asn  
 165 170 175  
 Leu Leu Phe Ile Gln Thr Ser Ala Lys Thr Gly Thr Asn Ile Lys Asn  
 180 185 190  
 Ile Phe Tyr Met Leu Ala Glu Glu Ile Tyr Lys Asn Ile Ile Asn Asn  
 195 200 205  
 Asn Asn Thr Ser Lys Asn Lys Thr Val Asn Lys Asn Leu Ile Asn Leu  
 210 215 220  
 Asp Asn Gln Thr Leu Ser Lys Lys Gly Cys Cys  
 225 230 235

&lt;210&gt; 100

&lt;211&gt; 384

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 100

Met Phe Leu Tyr Phe Ile Thr Tyr Leu Cys Ile Phe His Asn Asn Ile  
 1 5 10 15  
 Tyr Ser Val Glu Leu Ile Lys Asn Asn Lys Tyr Asn Phe Ile Asn Asn  
 20 25 30  
 Val His Asn Ile Lys Tyr Arg Thr Lys Ile Arg Ala Ile Tyr Gly Lys  
 35 40 45  
 Ser Asn Lys Tyr Val Tyr Met Phe Val Cys Leu Tyr Val Ser Gly Gly  
 50 55 60  
 Lys Ile Ile Gly His Gly His Ser Tyr Pro Ser Thr Glu Ile Tyr Asn  
 65 70 75 80  
 Asp Glu Leu Lys Lys Tyr Val Asp Thr Asn Asp Glu Trp Ile Arg Thr  
 85 90 95  
 Arg Thr Gly Ile Lys Lys Arg Arg Ile Leu Lys Arg Asp Glu Asn Ile  
 100 105 110  
 Ser Met Leu Gln Ile Asp Ser Ala Thr Gln Ala Leu Glu Thr Ser Cys  
 115 120 125  
 Leu Lys Pro Ser Asp Ile Asp Met Val Ile Asn Ala Ser Ser Thr Pro  
 130 135 140  
 Gln Asn Leu Phe Gly Asp Ala Asn Asn Ile Ser Asn Lys Ile Gly Cys  
 145 150 155 160  
 Lys Asn Ser Val Asn Met Asp Leu Thr Ala Ala Cys Thr Gly Phe Ile  
 165 170 175  
 Phe Ala Phe Val Thr Ala Tyr Asn Phe Leu Asn Arg Tyr Lys Asn Ile  
 180 185 190  
 Leu Ile Val Gly Ser Asp Ala Leu Ser Asn Phe Val Asp Trp Arg Asp  
 195 200 205  
 Arg Asn Thr Cys Val Leu Phe Gly Asp Ala Ala Gly Ala Val Val Leu  
 210 215 220  
 Gln Arg Thr Glu Glu Lys Glu Glu Asn Lys Ile Phe Asn Tyr Tyr Leu  
 225 230 235 240

Gly Ser Asp Ser Glu Leu Asn Asp Leu Leu Thr Ile Asn Phe Asp His  
 245 250 255  
 Asp Lys Tyr Asn Leu Asp Lys Pro Asn Val Asn Lys Tyr Gly Lys Leu  
 260 265 270  
 Tyr Met Asn Gly Lys Glu Val Phe Lys Tyr Thr Ile Ser Asn Ile Pro  
 275 280 285  
 Lys Ile Leu Lys Lys Ala Ile Gln His Ser Asn Ile Asn Ile Glu Asp  
 290 295 300  
 Ile Asn Tyr Phe Ile Phe His Gln Ala Asn Ile Arg Ile Ile Glu Thr  
 305 310 315 320  
 Val Ala Lys Asn Leu Asn Ile Pro Met Ser Lys Val Leu Val Asn Leu  
 325 330 335  
 Asp Glu Tyr Ala Asn Thr Ser Ala Ala Ser Ile Pro Leu Cys Phe Ser  
 340 345 350  
 Glu Asn Ile Lys Asn Gly Lys Ile Lys Thr Asn Asp Ile Ile Cys Met  
 355 360 365  
 Cys Gly Phe Gly Ala Gly Met Ser Tyr Gly Cys Val Ile Leu Lys Tyr  
 370 375 380

<210> 101  
 <211> 1245  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 101  
 Met Asn Glu Arg Val Leu Asn Val Ala Met Lys Tyr Lys Ser Ser Cys  
 1 5 10 15  
 Leu Leu Tyr Lys Lys Asn Phe Asn Phe Lys Leu Phe Ser Tyr Leu Lys  
 20 25 30  
 Val Cys Tyr His Asn Asp Leu Trp Leu His Lys Lys Asn Gln Asn Gly  
 35 40 45  
 Asp Ser Asp Ser Arg Asn Ile Ser Leu Val Ser Ala Gln Ile Asn Asn  
 50 55 60  
 Glu Asn Lys Asn Asn Asn Ile Ser Asp Asp Lys Asp Leu Lys Ser Asp  
 65 70 75 80  
 Gly Val Lys Lys Cys Ile Gly Gln Lys Asn Lys Leu Tyr Phe Asp Glu  
 85 90 95  
 Lys Ile Leu Leu Lys Phe Gly Asn Met Gly Thr Tyr Lys Lys Trp Gln  
 100 105 110  
 Cys Ser Phe Phe Ser Thr Ser Glu Glu Lys Lys Tyr Lys Ile Glu Lys  
 115 120 125  
 Tyr Met Lys Leu Asp Glu Lys Lys Lys Asp Asn Asn Ile Ser Cys Asn  
 130 135 140  
 Asp Leu Asp Asn Thr Gln Met Lys Ile Lys Asn Gln Val Val Gly Asn  
 145 150 155 160  
 Asp Phe Asn Gly Cys Asn Leu Glu Glu Arg Lys Asp Asn Asn Glu Tyr  
 165 170 175

Asp Asn Asp Lys Tyr Lys Lys Asp Ser Phe Glu Gln Asp Glu Glu Asn  
 180 185 190  
 Glu Lys Met Arg Lys Lys Lys Glu Ile Lys Lys Ile Leu Asn Ile Ile  
 195 200 205  
 Phe Cys Ser Ser Ile Pro Met Ile Gly Phe Gly Phe Met Asp Gln Phe  
 210 215 220  
 Ile Met Ile Arg Leu Gly Asp Ile Phe Asp Ala Ser Ile Gly Val Thr  
 225 230 235 240  
 Phe Gly Ile Ser Thr Leu Cys Ala Ala Ser Phe Gly Gln Leu Cys Ser  
 245 250 255  
 Asp Thr Phe Gly Ile Phe Phe Gly Tyr Val Leu Asn Tyr Leu Leu Gln  
 260 265 270  
 Thr Tyr Lys Ile Ile Gln Pro Ile Lys Tyr Asp Ile Lys Asn Lys Val  
 275 280 285  
 Tyr Gln Tyr Cys Thr Leu Ile Gly Ser Val Leu Gly Ile Leu Phe Gly  
 290 295 300  
 Cys Ala Leu Gly Met Leu Gln Leu Ile Phe Ile Asp Thr Thr Lys Ser  
 305 310 315 320  
 Glu Arg Leu Lys Lys Lys Lys Glu Leu Asp Phe Ile Phe Gln Met Val  
 325 330 335  
 Met Cys Asp Cys Ser Asn Val Leu Asn Cys Glu Ala Ser Thr Leu Phe  
 340 345 350  
 Leu Tyr Asp Lys Ala Lys Asn Glu Leu Trp Ser Lys Ala Ile His Gly  
 355 360 365  
 Arg Lys Asn Ile Ile Lys Ile Ser Ala Asp Ser Asp Glu Lys Ser Phe  
 370 375 380  
 Asn Leu Trp Val Leu Arg Asn Lys Glu Ile Ile Asn Cys Lys Asp Val  
 385 390 395 400  
 Ala Asn His Glu Leu Phe Asn Pro Ser His Asp Glu Lys Phe Asn Phe  
 405 410 415  
 Lys Thr Lys Thr Ile Leu Ala Ala Pro Ile Leu Asp Lys Asn Asp Glu  
 420 425 430  
 Val Val Gly Val Leu Met Phe Leu Asn Lys Leu Arg Ser His Gly Gly  
 435 440 445  
 Tyr Phe Thr Arg Asp Asp Glu Lys Leu Ala Glu Met Met Cys Lys His  
 450 455 460  
 Ile Ser Ile Phe Met Glu Lys Phe His Tyr Ile Ser Glu Gly Asp Lys  
 465 470 475 480  
 Lys Met Ile Ile Phe Asp Lys Glu Lys Asn Asn Val Lys Glu Glu Asp  
 485 490 495  
 Asp Glu Asp Asp Asp Tyr Asp Asn Asp Asn Asp Asp Asp Glu Glu Gly  
 500 505 510  
 Thr Glu Leu Lys Glu Lys Glu Lys Val Lys Glu Glu Lys Tyr Glu Asp  
 515 520 525  
 Ile Lys Lys Lys Lys Lys Arg Gln Lys Arg Asn Ile Leu Pro Tyr Asn  
 530 535 540  
 Ile Leu Lys Met Glu Lys Asp Asp Asp Lys Ile Phe Asp Glu Gly Asp

545                      550                      555                      560  
 Glu Asn Arg Glu Ser Lys Glu Leu Asn Glu Asp Glu Asp Glu Glu Glu  
                                  565                      570                      575  
 Asp Glu Glu Glu Asp Glu Glu Glu Asp Glu Glu Val Val Tyr Glu Glu  
                                  580                      585                      590  
 Asn Ile Lys Glu Asn Lys Asp Asp Ile Asp Tyr Asp Asp Asp Lys Tyr  
                                  595                      600                      605  
 Asp Lys Asn Tyr Glu His Asp Glu Lys Lys Glu Asn Ile Phe Tyr Lys  
                                  610                      615                      620  
 Gln Asn Gly Asp Asp His Asp Glu Asn Asn Tyr Glu Leu Ile Gln Asp  
                                  625                      630                      635                      640  
 Tyr Tyr Tyr Val Glu Lys Asn Asn Ile Tyr Asn Lys Asn Asp Thr Ile  
                                  645                      650                      655  
 Gln Tyr Glu Gln Asn Asn Asn Ile Tyr Lys Thr Lys Phe Ser Asn Asn  
                                  660                      665                      670  
 Ile Tyr Thr Pro Lys Phe Asp Asn Tyr Met Asp Tyr Lys Gly Asn Ile  
                                  675                      680                      685  
 Lys Glu His Thr Ala Asn Asn Ile Lys His Gln Leu Leu Leu Phe Asn  
                                  690                      695                      700  
 Ile Asp Lys Thr Met Lys Asp Glu Ile Leu Thr Ser Asp Lys Ile Asn  
                                  705                      710                      715                      720  
 Lys Asp Lys Ser Ser Asp Asp Ile Ile Asn Ser Asn Lys Thr Tyr Asn  
                                  725                      730                      735  
 Glu Lys Asn Lys Leu Tyr Thr Ser Thr Thr Gly Ile His Lys Asn Asn  
                                  740                      745                      750  
 Met Gly Asp Lys Leu Gln Asp Asp Thr Phe Tyr Phe Lys Leu Leu Asn  
                                  755                      760                      765  
 Lys Asn Lys Tyr Tyr Met Asn Asn Val Asn Gly Asn Leu Asp Ile Tyr  
                                  770                      775                      780  
 Tyr Ile Leu Tyr Asn Ile Glu Ser Val Glu Gln Leu Phe Lys Lys Ile  
                                  785                      790                      795                      800  
 Lys Glu Asn Asn Phe Leu Leu Phe Asn Met Lys Asn Cys Ile Arg Met  
                                  805                      810                      815  
 Phe Ile Leu Phe Arg Asp Leu Tyr Val Lys Glu Glu Asn Gly Tyr Asn  
                                  820                      825                      830  
 Ile Ile Lys Ser Gln Asn Asn Thr Thr Thr Ile Thr Thr Thr Asn  
                                  835                      840                      845  
 Ser Asn Asp Ser Asn Asp Ser Ser Asp Asn Asn Asn Asn Asn Asn  
                                  850                      855                      860  
 Asn Asn Asn Asn Asn Asn Asn Tyr Asn Asn Asn Asn Ser Val Ile Phe  
                                  865                      870                      875                      880  
 Ser Thr Asn Glu Lys Ile Tyr Asp Met Leu Asn Arg Asp Asn Ile Tyr  
                                  885                      890                      895  
 Lys Lys Val Lys Lys Glu Ile Phe Glu Gly Asp Ser Ile Ile Lys Thr  
                                  900                      905                      910  
 Met Glu Asn Lys Pro Asn Leu Thr Asn Lys Asn Tyr Met Asn Asn Asp  
                                  915                      920                      925

Asn Ile Asp Asn Asn Asn Asn Asn Asn Asn Asn Asn Ile Asp Asn  
 930 935 940  
 Asn Asn Asn Asn Asn Gly Asp Asn Ile Tyr Asn Asp Asp Leu Lys Lys  
 945 950 955 960  
 Tyr Tyr Leu Asn Thr Ser Ile Phe Asn Lys Asp Leu Tyr Val Lys His  
 965 970 975  
 Phe Val Asp Ile Ile Met Asn Lys Ser Leu Glu Glu Ile Ile Lys Met  
 980 985 990  
 Asn Val Tyr Ile Ser Glu Arg Ile Asn Ser Leu Leu Phe His Lys Gly  
 995 1000 1005  
 Asn Met Leu Asn Asp Val Thr Lys Leu Tyr Met Ser Asn Ala Tyr Gly  
 1010 1015 1020  
 Glu Lys Cys Phe Phe Phe Asn Phe Pro Gln Ile Lys Glu Ile Ile Phe  
 1025 1030 1035 1040  
 Val Asn Glu Tyr Glu Lys Lys Met Asp Met Lys Tyr Phe Lys Met Leu  
 1045 1050 1055  
 Lys Lys Ile Tyr Lys Tyr Asn Leu Asn Lys Ile Phe Ser Asn Asn Tyr  
 1060 1065 1070  
 Lys Phe Phe Ile Ile Lys Lys Lys Lys Lys Leu Lys Lys Leu Cys Tyr  
 1075 1080 1085  
 Ile Met Lys Ser Phe His Pro His Ile Leu Asp Glu Phe Trp Phe Asn  
 1090 1095 1100  
 Leu Ser Cys Gln Asn Glu Ile Lys Asn Ile Tyr Tyr Lys Asn Leu His  
 1105 1110 1115 1120  
 Phe Val Ile Ser Leu His Asn Ser Ser Ile Ile Asp Phe Lys Ile Ile  
 1125 1130 1135  
 Asn His Phe Ile Leu Asn Lys Ile Phe Glu Asn Ile Ser Ile Asn Cys  
 1140 1145 1150  
 Thr Thr Ser Ser Met Tyr Tyr Asn Ile Lys Thr Ile Asp Phe Ile Ser  
 1155 1160 1165  
 Tyr Arg Asn Leu Tyr Leu Leu Lys Asn Tyr Thr Met His Asp Leu Ile  
 1170 1175 1180  
 Tyr Lys Tyr Ile Ile Tyr Tyr Tyr Cys Arg Lys Lys Leu Lys Arg Lys  
 1185 1190 1195 1200  
 Asn Phe His Tyr Phe Asn Tyr Gln Asp Leu Tyr Ile Ala Glu Asn Tyr  
 1205 1210 1215  
 Phe Gly Leu Asn Thr His Thr Lys Lys Val Pro Asn Met Leu Asp Gln  
 1220 1225 1230  
 Asn Ile Gly Lys Lys Ser Ala Ile Val Thr Val Glu Arg  
 1235 1240 1245

&lt;210&gt; 102

&lt;211&gt; 209

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 102

Met Leu Phe Leu Phe Leu Cys Ile Ile Ile Asn Thr Leu Val Phe Leu  
 1 5 10 15

Trp Phe Val Ile Asn Ile Phe Leu Lys Ser Ser Asn Thr Tyr Lys Asp  
                     20                    25                    30  
 Lys Gly Arg Asn Glu Met Val Glu Met Gly Val Val Leu Gly Ser Gly  
                     35                    40                    45  
 Gly His Thr Tyr Glu Met Ile Gln Ile Leu Lys Gln Ile Lys Asn Ser  
                     50                    55                    60  
 Asn Ile Leu Phe Asn Phe Phe Tyr Ser His Asn Asp Asn Leu Ser Lys  
                     65                    70                    75                    80  
 Ile Lys Thr Glu Asn Glu Leu Val Asn Tyr Gln Lys Asn Phe Phe Val  
                     85                    90                    95  
 Ile Pro Arg Cys Arg Asn Val Gly Asp Ser Tyr Ser Leu Ser Phe Ile  
                     100                    105                    110  
 Lys Phe Ile Phe Ser Phe Leu Tyr Cys Ile Phe Leu Thr Tyr Lys Met  
                     115                    120                    125  
 Lys Asn Met Lys Val Ile Met Val Asn Gly Pro Gly Val Cys Val Pro  
                     130                    135                    140  
 Leu Val Tyr Ser Leu Ile Phe Arg Lys Tyr Ile Phe Leu Lys Asn Ile  
                     145                    150                    155                    160  
 Lys Ile Val Tyr Ile Glu Ser Ile Cys Arg Val Tyr Ser Leu Ser Leu  
                     165                    170                    175  
 Ser Ala Lys Leu Leu Tyr Tyr Phe Ala Asp Leu Phe Val Val Phe Ser  
                     180                    185                    190  
 Glu His Leu Lys Lys Lys Tyr Lys Lys Ala Lys Tyr Tyr Gly Tyr Phe  
                     195                    200                    205  
 Phe

<210> 103  
 <211> 1233  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 103  
 Met Gly Lys Arg Ile Lys Cys Asn Asn Val Ser Tyr Ile Arg Thr Val  
                     1                    5                    10                    15  
 Arg Gly Val Tyr Ile Gly Arg Ile Glu Asn Gly Gln Lys Asn Gly Trp  
                     20                    25                    30  
 Gly Leu Gln Ile Asn Asn Asn Gly Asn Lys Tyr Glu Gly Leu Phe Lys  
                     35                    40                    45  
 Asn Asp Glu Lys Tyr Leu Phe Gly Leu Glu Leu Ile Cys Cys Leu Cys  
                     50                    55                    60  
 Gly His Thr Tyr Arg Asn Lys Val Gln Asn Gly Ile Tyr Glu Lys Gly  
                     65                    70                    75                    80  
 Lys Ile His Tyr Lys Asp Val Asn Asn Ile Ser Ala Tyr Asn Asn Asp  
                     85                    90                    95  
 Asp Gln His Asp Asn Ile His His Glu Lys Val Tyr His Glu Asn Ile  
                     100                    105                    110  
 His His Glu Lys Val Tyr His Glu Asn Ile His His Glu Lys Val Tyr  
                     115                    120                    125

His Asp Asn Ile Asn His Glu Lys Val Tyr His Gly Asn Ile Tyr Asp  
 130 135 140  
 His Asn Ile Tyr His Asn Asn Lys Phe Asn Phe Gln Tyr Ser Ser Glu  
 145 150 155 160  
 Asn Glu Phe Ala Lys Gly Asn Ile Cys Val His Glu Asn Arg Tyr Ile  
 165 170 175  
 Tyr Ile Gly Thr Tyr Lys Lys Gly Lys Lys His Gly Lys Gly Ile Leu  
 180 185 190  
 Ile Asn Tyr Asn Asn Tyr Phe Met Tyr Ser Cys Ile Phe Tyr Lys Asn  
 195 200 205  
 Lys Ile Ile Tyr Val Asp Met Leu Phe Ser Lys Val Gln Lys Tyr Met  
 210 215 220  
 Asn Met Lys Asn Ile Asp Met Lys His Tyr Asn Thr His Lys Lys Lys  
 225 230 235 240  
 Lys Ile Tyr Leu Phe Leu Gln Lys Glu Tyr Lys Asn Lys Ile Leu Gly  
 245 250 255  
 Phe Ile Asn Phe Tyr Lys His Ile Thr His Lys Ile Lys Lys Lys Gln  
 260 265 270  
 Glu Asn Val His Asp Lys Ile Thr Phe Leu Lys Cys Leu Lys Glu Leu  
 275 280 285  
 Phe Phe Val Thr His Thr Asn Lys Glu Asn Asn Gln Met Glu Gly Ile  
 290 295 300  
 Ile His Thr Tyr Lys Asn Tyr Thr Ile Asn Lys Asn Asp Asn Thr Tyr  
 305 310 315 320  
 Asn Ile Phe Lys Glu Lys Leu His Asn Ile Thr Gln Gly Gly Asn Lys  
 325 330 335  
 Thr Gln His Glu Lys Arg Tyr Met Lys Thr Ile Tyr Arg His Ala Gly  
 340 345 350  
 His Glu Asn Val Ile Leu Asn Asn Lys Arg Lys Glu Lys Asn Lys Ser  
 355 360 365  
 Thr Asn Met Ser Ser Asp Glu Lys Lys Thr Asn Lys His Thr Asn Ile  
 370 375 380  
 Ser Ser Asp Glu Lys Lys Lys Asn Lys His Thr Asn Ile Ser Ser Asp  
 385 390 395 400  
 Glu Lys Lys Lys Lys Lys Arg Thr Asn Ile Thr Asn Asp Glu Lys Thr  
 405 410 415  
 Asn Lys His Thr Asn Ile Ile Asn Asp Glu Lys Thr Asn Lys Arg Thr  
 420 425 430  
 Asn Ile Ser Asn Asp Glu Lys Thr Asn Lys His Thr Thr Ile Ser Cys  
 435 440 445  
 Asp Glu Lys Lys Asn Gly Tyr Leu Phe Leu Ser Asn Glu Ile Lys Thr  
 450 455 460  
 Lys Tyr Cys Met Ile Glu Asn Met Lys Lys Lys Lys Glu Ser Tyr Thr  
 465 470 475 480  
 Met Ile Asn Asn Asn Lys Lys Lys Glu His Leu Tyr Asn Leu Lys Ser  
 485 490 495

Met Ile Tyr Gln Glu Val Gln Phe His Asn Asn Ser Ile Cys Asp  
500 505 510

His Glu Asn Lys Lys Lys Asn Arg Asn Ile Glu Met Pro Phe Phe Leu  
515 520 525

Lys Arg Thr Lys Lys Asn Asn Asp Ile Glu Gln Leu Val Leu Val Lys  
530 535 540

Asn Lys Tyr Asn Lys Cys Tyr Asn Leu Glu Ser Gly Lys Asp Asp Ile  
545 550 555 560

Ile Tyr Asn Asn Gln Lys Asp Lys Ile Lys Lys Asp Lys Leu Lys Val  
565 570 575

Pro Phe Phe Phe Lys Glu Lys Gly Ile Tyr Asn Phe Phe Asn Lys Thr  
580 585 590

Val Glu Asn Lys Glu Asp Glu Arg Phe Phe Val His Glu Gln Asn Asp  
595 600 605

Glu Lys Ile Phe Thr Asp Lys Val Thr Asn Asp Val Arg Thr Asn Asp  
610 615 620

Ile Arg Thr Asn Asp Ile Arg Thr Asn Asp Val Arg Thr Tyr Asp Val  
625 630 635 640

Arg Thr Asn Asp Val Arg Thr Asn Asp Ile Arg Thr Asn Asp Ile Arg  
645 650 655

Thr Asn Asp Ile Arg Thr Asn Asp Ile Arg Thr Asn Asp Ile Arg Thr  
660 665 670

Asn Asp Ile Pro Tyr Asn Ile Ile Pro Asn Lys Arg Glu Thr Ile Val  
675 680 685

Asp Asp Ile Asn Ser Cys Ser Asn Asn Phe Thr Thr Arg Ser Asn Thr  
690 695 700

Asp Asn Ala Asn Ser Tyr His Met Asn Met Tyr Ser Asp Ser Asn Asn  
705 710 715 720

Phe Tyr Gly Asn Lys Lys Lys Lys Ile Lys Lys Arg Asn Asn Asn Lys  
725 730 735

Cys Glu Tyr Ser Ser Ile Ile Lys Asn Lys Asn Gln Leu Tyr Asn Asp  
740 745 750

Gln Ile His Asn Asn Thr Cys Val Cys Ile Lys Phe Lys Thr Lys Cys  
755 760 765

Cys Ser Phe Lys Ile Asn Lys Leu Glu Lys Lys Lys Lys Glu Ser Tyr  
770 775 780

Lys Cys Asn Ser His Lys Glu Leu Lys Gln His Asp Lys Asn Leu Leu  
785 790 795 800

Phe Asn Asn Tyr Ile Phe Asn Asp Asn Phe Leu Asp Asn Val Phe Val  
805 810 815

Leu Lys Pro Pro Met Asp Glu Glu Glu Lys Lys Lys Asn Tyr Asp Lys  
820 825 830

Leu Lys Arg Asp Thr Phe Pro Leu Phe Leu Arg Lys Lys Lys Lys  
835 840 845

Leu Phe Gln Ala Gln Asn Tyr Ile Tyr Trp Asn Ile Phe Glu Leu Asn  
850 855 860

Leu Phe Phe Phe Leu Val Gly Ile Pro Lys Glu Ile Leu Glu Ile Phe



865	870	875	880
Ile Tyr His Arg Leu Asp Gly Tyr Cys Leu Lys Tyr Ile Asp Lys Lys	885	890	895
Ile Leu Lys Glu Met Lys Ile Lys Asn Arg Met Met Arg Lys Tyr Ile	900	905	910
Tyr Leu Cys Ile Gln Tyr Leu Leu Arg Leu Arg Glu Lys Tyr Lys Tyr	915	920	925
Lys Lys Lys Ser Asn Ser Lys Leu Thr Glu Lys Ile Asn Glu Asp Phe	930	935	940
Ile Leu Lys Lys Glu Gln Leu His Ile Leu Asn Leu Ile Gly Arg Gly	945	950	955
Gly Tyr Ser Asn Val Tyr Arg Cys Ile Tyr Gly Asn Lys Asn Ile Leu	965	970	975
Arg Ile Asn Lys Phe Phe Asp Ile His Tyr Ser Ile Asn Asn Thr Ala	980	985	990
Leu Lys Ile Phe Leu Asn Lys Lys Lys Asn Ile Leu Glu Tyr Phe Thr	995	1000	1005
Glu Leu Tyr Ile Val Ser Asn Leu Arg His Pro Asn Val Thr Leu Phe	1010	1015	1020
Leu Gly Ala Ile Asn Asn Pro Arg Ala Ile Val Leu Glu Tyr Ile Gln	1025	1030	1035
Tyr Gly Thr Leu Phe Asp Ile Leu His Lys Tyr Lys Ile Asn Met Lys	1045	1050	1055
Leu Gln Asp Ile Ile Lys Ile Ser Lys Asp Ile Thr Ala Phe Met Ser	1060	1065	1070
Phe Leu His Asn Lys Gly Ile Met His Cys Asp Leu Lys Ser Ser Asn	1075	1080	1085
Ile Leu Ile Ser Ile Thr Arg Asp Ile Lys Ile Cys Asp Phe Gly Leu	1090	1095	1100
Ser Val Phe Asn Lys Tyr Asn Lys Pro Lys Tyr Leu Gly Ile Val Gly	1105	1110	1115
Thr Tyr Gln Trp Thr Ala Pro Glu Val Leu Arg Ser Glu Gly Tyr Thr	1125	1130	1135
Lys Glu Ala Asp Ile Tyr Ser Phe Gly Val Ile Leu Trp Glu Met Ile	1140	1145	1150
His Arg Lys Ile Pro Phe Ser Asp Met Lys Asn Pro Leu Asp Ile Ile	1155	1160	1165
Ala His Val Gly Tyr Ala Asn Lys Lys Leu Ser Val Thr Asn Lys Asn	1170	1175	1180
Ile Pro Asp Gln Leu Lys Tyr Ile Leu His Ser Cys Leu His Lys Asn	1185	1190	1195
Thr His Lys Arg Lys Ser Phe Leu Phe Trp Ser Glu Tyr Phe Asp Phe	1205	1210	1215
Leu Tyr Asn Val Thr Asp Ile Pro Lys Glu Asp His Thr Ser Phe Phe	1220	1225	1230

Phe

<210> 104  
 <211> 610  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 104

Met	Cys	Glu	Lys	Asp	Asp	Ile	Thr	Val	Asn	Glu	Glu	Ile	Leu	Gln	Lys	1	5	10	15
Ala	Gln	Glu	Phe	Gln	Val	Glu	Asn	Glu	Lys	Asp	Ile	Lys	Met	Lys	Lys	20	25	30	
Leu	Lys	Pro	Ile	Thr	Glu	Gly	Leu	Leu	Lys	Pro	Glu	Val	Asp	Leu	Leu	35	40	45	
Gln	Ile	Ser	Glu	Arg	Gly	Ser	Arg	Gly	Arg	Val	Lys	Ile	Cys	Asn	Val	50	55	60	
Leu	Asn	Val	Pro	Arg	Ser	Glu	Lys	Glu	Tyr	Asn	Asn	Asn	Asn	Ser	Asp	65	70	75	80
Lys	Val	Glu	Asn	Lys	Tyr	Ile	Gly	Lys	Ile	Ile	Thr	Val	Cys	Gly	Trp	85	90	95	
Ser	Lys	Ala	Ile	Arg	Lys	Gln	Gly	Gly	Gly	Arg	Phe	Cys	Phe	Val	Asn	100	105	110	
Leu	Asn	Asp	Gly	Ser	Cys	His	Leu	Asn	Leu	Gln	Ile	Val	Val	Asn	Gln	115	120	125	
Cys	Ile	Glu	Asn	Tyr	Glu	Lys	Leu	Leu	Lys	Cys	Gly	Ala	Gly	Cys	Cys	130	135	140	
Phe	Arg	Phe	Thr	Gly	Glu	Leu	Ile	Ile	Ser	Pro	Val	Gln	Asn	Asp	Asn	145	150	155	160
Asn	Lys	Lys	Gly	Leu	Leu	Lys	Glu	Asn	Val	Glu	Leu	Ala	Leu	Asn	Asn	165	170	175	
Asn	Asp	Ile	His	Asn	Phe	Glu	Ile	Tyr	Gly	Glu	Asn	Leu	Asp	Pro	Gln	180	185	190	
Lys	Tyr	Pro	Leu	Ser	Lys	Lys	Asn	His	Gly	Lys	Glu	Phe	Leu	Arg	Glu	195	200	205	
Val	Ala	His	Leu	Arg	Pro	Arg	Ser	Tyr	Phe	Ile	Ser	Ser	Val	Ile	Arg	210	215	220	
Ile	Arg	Asn	Ser	Leu	Ser	Ile	Ala	Thr	His	Leu	Phe	Phe	Gln	Ser	Arg	225	230	235	240
Gly	Phe	Leu	Tyr	Ile	His	Thr	Pro	Leu	Ile	Thr	Thr	Ser	Asp	Cys	Glu	245	250	255	
Gly	Gly	Gly	Glu	Met	Phe	Thr	Val	Thr	Thr	Leu	Leu	Asn	Glu	Asn	Gly	260	265	270	
Asp	Ile	Arg	Ser	Ile	Pro	Arg	Ile	Asn	Leu	Lys	Asn	Lys	Lys	Lys	Glu	275	280	285	
Lys	Arg	Glu	Asp	Ile	Leu	Asn	Glu	Lys	Asn	Gly	Lys	Lys	Asp	His	Met	290	295	300	
Asn	Asp	Ser	Leu	Asn	Asn	Asn	Thr	Cys	Asn	Asn	Asn	Asn	Asn	Asn	Gly	305	310	315	320
Asn	Ser	Ser	Ser	Ser	Asn	Ile	Val	Ser	Ser	Pro	Gln	Tyr	Glu	Asp	Asn	325	330	335	

Tyr Leu Ile Asp Tyr Lys Lys Asp Phe Phe Ser Lys Gln Ala Phe Leu  
 340 345 350  
 Thr Val Ser Gly Gln Leu Ser Leu Glu Asn Leu Cys Ser Ser Met Gly  
 355 360 365  
 Asp Val Tyr Thr Phe Gly Pro Thr Phe Arg Ala Glu Asn Ser His Thr  
 370 375 380  
 Ser Arg His Leu Ala Glu Phe Trp Met Ile Glu Pro Glu Ile Ala Phe  
 385 390 395 400  
 Ala Asp Leu Tyr Asp Asn Met Glu Leu Ala Glu Ala Tyr Ile Lys Tyr  
 405 410 415  
 Cys Ile Asp Tyr Val Leu Asn Asn Asn Phe His Asp Ile Tyr Tyr Phe  
 420 425 430  
 Glu Glu Asn Val Glu Thr Asn Leu Ile Lys Arg Leu Lys Asn Ile Leu  
 435 440 445  
 Asn Glu Asp Phe Ala Lys Ile Thr Tyr Thr Asn Ala Ile Glu Ile Leu  
 450 455 460  
 Gln Asn Tyr Ser Asp Ser Phe Glu Val Lys Val Glu Trp Gly Met Asp  
 465 470 475 480  
 Leu Gln Ser Glu His Glu Arg Phe Ile Ala Glu Lys Ile Phe Lys Lys  
 485 490 495  
 Pro Val Ile Val Tyr Asn Tyr Pro Lys Asp Leu Lys Ala Phe Tyr Met  
 500 505 510  
 Lys Leu Asn Glu Asp Asn Lys Thr Val Ala Ala Met Asp Val Leu Val  
 515 520 525  
 Pro Lys Ile Gly Glu Val Ile Gly Gly Ser Gln Arg Glu Asp Asn Leu  
 530 535 540  
 Glu Arg Leu Asp Lys Met Ile Lys Glu Lys Lys Leu Asn Ile Asp Ser  
 545 550 555 560  
 Tyr Trp Trp Tyr Arg Gln Leu Arg Gln Tyr Gly Ser His Pro His Ala  
 565 570 575  
 Gly Phe Gly Leu Gly Phe Glu Arg Leu Ile Met Leu Val Thr Gly Val  
 580 585 590  
 Asp Asn Ile Lys Asp Thr Ile Pro Phe Pro Arg Tyr Pro Gly His Ala  
 595 600 605  
 Glu Phe  
 610

&lt;210&gt; 105

&lt;211&gt; 407

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 105

Met Phe Thr Phe Gly Thr Ser Arg Asn Lys Glu Ser Val Leu Lys Asn  
 1 5 10 15

Leu Ser Leu Leu Asn Glu Asp Glu Gly Lys Gly Trp Asn Ile Leu Tyr  
 20 25 30

Lys Leu Tyr Ser Gln Ile Ser Gly Cys Val Leu Ile Cys Lys Asn Lys  
 35 40 45

Ile Ile Lys Tyr Asn Ser Tyr Asp Asn Ile Phe Leu Thr Leu Val Tyr  
 50 55 60  
 Gly Lys Ile Glu Asn Val Lys Asn Met Lys Glu Lys Asn Tyr Tyr Tyr  
 65 70 75 80  
 Asn Glu Ile Lys Leu Tyr Leu Lys Tyr Leu Pro Glu Ser Asn Ile Met  
 85 90 95  
 Ile Thr Thr Asn Asn Tyr Glu Asp Ile Asn Lys Met Lys Cys Leu Lys  
 100 105 110  
 Tyr Glu Val Leu Asn Asn Asn Ile Tyr Tyr Gln Lys His Asn Phe Ser  
 115 120 125  
 Leu Leu Lys Leu Tyr Ile Asn Ala Cys Asn Ser Gln Tyr Ile Lys Pro  
 130 135 140  
 Leu Leu Tyr Tyr Ser Leu His Thr Cys Ile Val Gly Asp Asn Glu Tyr  
 145 150 155 160  
 Ile Asn Val His Lys Lys Ile Leu Gln Lys Lys Lys Asn Glu Lys Tyr  
 165 170 175  
 Ile Ile Lys Lys Glu Pro Tyr Leu Leu Tyr Asn Asn Asn Asn Asn Asp  
 180 185 190  
 His Val Pro Asn Ile Leu Lys Ser Arg Lys Phe Leu Leu Lys Lys Leu  
 195 200 205  
 Asn Lys Glu Lys Gln Gly Asn Glu Leu Lys Leu His Leu His Cys Leu  
 210 215 220  
 Asn Val Thr Phe Gln Tyr Gln Cys Asn Lys Ile Lys Ser Ile Cys Ala  
 225 230 235 240  
 Pro Val Pro Ser His Phe Lys Asp Thr Leu His Ile Leu Gly Ala Ile  
 245 250 255  
 Asn Ile Ile Lys Asn Met Glu Asn Ile Gln Ile Leu Lys Asn Asp Asn  
 260 265 270  
 Leu Met Glu Asn Gln Asn Gln Gln Asn Lys Met Glu Leu Leu Lys Asn  
 275 280 285  
 Lys Asn Asn Asn Thr Tyr Glu Lys Ser Ile Gln Ile Lys Lys Lys His  
 290 295 300  
 Glu His Lys Lys Asp Glu Val Lys Tyr Tyr Asp Asn Met Gln Asp Lys  
 305 310 315 320  
 Glu Leu Phe Glu Lys Gln Asn Asp Asn Leu Leu Lys Asp Ile Tyr Tyr  
 325 330 335  
 Asn Lys Glu Asp Asp Asn Asn Lys Pro Lys Ile Asn Thr His Leu Asn  
 340 345 350  
 Ile Asn Glu Thr Val Asp Thr Tyr Asn His Leu Asn Asp Asp Asp Met  
 355 360 365  
 Tyr Val Asp Arg Asn Thr Ser Lys Lys Lys Arg Leu Thr Lys Arg Arg  
 370 375 380  
 Gly Ile Leu Ser Lys Asp Phe Asn Lys Leu Ser Lys Arg Asp Ala Pro  
 385 390 395 400  
 Ile Phe Phe Thr Asp Ile Ala  
 405

<210> 106  
 <211> 311  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 106  
 Met Arg Asn Asn Leu Ile Val Phe Ile Cys Ile Thr Leu Tyr Leu Ile  
     1                    5                    10                    15  
 Ser Ser Ile Thr Cys Val Phe Ile Asn Lys Tyr Val Leu Met Glu Asn  
                     20                    25                    30  
 Thr Ile Asp Ser Val Leu Leu Ile Phe Val Gln His Ile Ser Cys Leu  
                     35                    40                    45  
 Met Phe Met Phe Phe Phe Lys Asp Ile Phe Phe Leu Lys Lys Glu Arg  
                     50                    55                    60  
 Asp Glu Lys Asn Ile Lys Glu Ser Ile Phe Ser Leu Tyr Asn Glu Ile  
                     65                    70                    75                    80  
 Lys Glu Leu Trp Pro Leu Ile Ile Thr Phe Asn Phe Thr Leu Val Phe  
                     85                    90                    95  
 Gly Asn Ile Cys Leu Lys Tyr Thr Ser Ile Ser Phe Tyr Gln Leu Ala  
                     100                    105                    110  
 Arg Ser Met Thr Leu Pro Phe Asn Phe Phe Phe Ser Tyr Phe Phe Phe  
                     115                    120                    125  
 Lys Gln Ile Lys Phe Asn Leu Leu Met Ile Ile Ser Cys Ile Ile Val  
                     130                    135                    140  
 Ser Ile Gly Phe Leu Ile Phe Ser Leu Asp Ala Val Asn Thr Asn Tyr  
                     145                    150                    155                    160  
 Asn Ser Val Leu Tyr Gly Thr Ile Val Ser Ile Ile Gln Ala Ile His  
                     165                    170                    175  
 Leu Asn Leu Ile Lys Lys Lys Leu Ile Ile Tyr Lys Asp Lys Met Val  
                     180                    185                    190  
 Met Leu Tyr Tyr Asn Leu Ile Tyr Ser Ser Ile Ile Leu Phe Ile Tyr  
                     195                    200                    205  
 Leu Phe Ile Thr Arg Asp Ile Phe Val Leu Val His Leu Asp Lys Arg  
                     210                    215                    220  
 Leu Thr Phe Tyr Leu Ile Leu Ser Cys Ile Ser Ser Ile Phe Val Thr  
                     225                    230                    235                    240  
 Phe Ser Ser Phe Leu Cys Ile His Tyr Thr Asp Asn Val Val Phe Asn  
                     245                    250                    255  
 Met Phe Gly Asn Val Lys Ser Thr Val Gln Thr Phe Met Ser Lys Tyr  
                     260                    265                    270  
 Tyr Asn Ser Glu Asn Phe Asn Thr His Thr Ile Ile Gly Ile Ile Leu  
                     275                    280                    285  
 Thr Thr Ser Gly Ser Cys Leu Tyr Thr Cys Cys Ser Glu Tyr Ser Lys  
                     290                    295                    300  
 Lys Arg Lys Ile Thr Ser Lys  
                     305                    310

<210> 107  
 <211> 1844

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 107

Met Asn Thr His Lys Asn Asn Asp Arg Phe Asp Glu Tyr Ser Leu Asn  
 1 5 10 15

Asn Asn Ser Asn Leu Asn Ala Tyr Val Asn Met Ser Asn Glu Ala His  
 20 25 30

Asn Asn Phe Leu Val Asn Arg Arg Asn Asp Met Asn Tyr Glu Met Tyr  
 35 40 45

Asn Ser Ile Asn Ser Gly His Met Ser Asn Ile Asn Asn Asn Thr Asn  
 50 55 60

Asn Leu Gln Asp Ala Tyr Ile Asn Lys Glu Leu His Tyr Met Asn Ser  
 65 70 75 80

Asp Lys Ile Asn Ile Ala Lys Asn His Gln Asn Val His Met Thr Ala  
 85 90 95

Thr Tyr Asn Asn Met Asp Lys Asn Asn Ala Asn Asn Asn Ile Ile His  
 100 105 110

Leu Asn Asn His Ile Asn Met Thr Asp Asp Gln Asn Tyr Phe Tyr Asn  
 115 120 125

Ser Thr Thr Asn Asn Lys Met Asn Asn Thr Leu Lys Glu Asn Asn Phe  
 130 135 140

Asn Asn Asn Met Asn Thr Val Asn Asn Ser Phe Tyr His Asn Thr Asp  
 145 150 155 160

Asn Asn Phe Leu Asn Phe Thr Arg Asn Gln Asn Glu Gln Asp Thr Tyr  
 165 170 175

Val Asn Asn Asn Ile Ile Asn Asn Phe Asn Asn Gln Asn Val Asp Lys  
 180 185 190

Asn Ile Asn Asn Asn Asn Asn Asn Pro Asn Lys Asn Val Glu Ser Ile  
 195 200 205

Asn Lys Phe Asn His Ile Tyr Asn Met Gln Asn Phe Asn His Phe Ile  
 210 215 220

Pro Asn Ile Ser Asn Gly Lys Asn Gly Asn Leu Glu Asn Asn Ala Ser  
 225 230 235 240

Leu Ser His Asn Val Asn Ser Val Ser Thr Ile Ser Glu Leu His Asn  
 245 250 255

Phe Asn Tyr Met Asn Asn Met Asp Leu Asn Asn Val Asp Met Asn Asn  
 260 265 270

Met Asn Met Asn Asn Met Asn Met Asn Asn Met Asn Met Asn Asn Met  
 275 280 285

Asn Met Asn Asn Met Asp Met Asn Asn Val Asn Met Asn Asn Met Asn  
 290 295 300

Met Asn Asn Met Asp Val Asn Ser Met Asn Met Asn Asn Met Asp Asn  
 305 310 315 320

Met Asn Asn Met Asn Met Asn Asn Met Asp Val Asn Asn Met Asn Met  
 325 330 335

Asn Asn Met Asp Val Asn Asn Met Asp Asn Met Asn Asn Met Asp Asn  
 340 345 350

Met Asn Asn Met Lys Asn Leu Ser Asn Phe Asn Asn Ser Tyr Gln Tyr  
 355 360 365

Asn Ser Ile Pro Gln Phe Asn Ser Ser Ser Arg Phe Asn Asn Ile Thr  
 370 375 380

His Phe Asn Asn Gly Ile Ser His Asn Val Asn Asn Val Ser Asn Phe  
 385 390 395 400

Ser Asn Asn Ala His Leu Asp Asn Ser Asn Asn Met Asn Arg Leu Asn  
 405 410 415

Ala Val Asn Asn Phe Gly Asp Ile Asn Ser Phe His Asp Pro Leu Asn  
 420 425 430

Glu Met Gln Val Leu Asn Lys Asn Val Asn Met Gln Asn Glu Asn His  
 435 440 445

Phe Asn Val Met Asn Asp Glu Met Lys Asn Tyr Asn Asn Val Lys Arg  
 450 455 460

Ile Asn Ser Ile Ser His Ile Pro Tyr Met Asn Asn Leu Lys Asn Tyr  
 465 470 475 480

Asn Glu His Thr Ser Met Val Lys Gly Lys Gly Asn Thr Asn Arg Lys  
 485 490 495

Lys Ser Asn Asn Leu Lys Ile Asn Asn Asn Pro Gly Ser Val Asn Ala  
 500 505 510

Arg Ala Ile Ser Glu Asn Asn Gln Ser Thr Ala His Gly Asn Ile Pro  
 515 520 525

Met Gly Ser Val Asp Lys Val Ile Lys His Asp Arg Met Asp Asn Asp  
 530 535 540

Leu Lys Asn Ile Asn Asn Met Asn Asn Met Asn Ser Met Asn Asn Met  
 545 550 555 560

Asn Ser Met Asn Asn Met Asn Asn Met Ile Asn Met Asn Asn Met Asn  
 565 570 575

Asn Met Asn Asn Met Ile Asn Met Asn Asn Met Asn Asn Met Asn Asn  
 580 585 590

Met Asn Asn Met Ser Asn Met Asn Asn Thr Ser Ile Leu Asn Asn Asn  
 595 600 605

Asn Lys Lys Ile Thr Lys Arg Gly Arg Ala Lys Lys Asn Ser Thr Ile  
 610 615 620

Asn Ile Asn Asn Ile Asn Lys Met Asn Ser Thr Asn Asn Lys Ser Ser  
 625 630 635 640

Met Ile Asn Met Asn Ser Val Asn Asn Met Asn Ser Val Asn Asn Met  
 645 650 655

Asn Ser Val Lys Asn Met Asn Ser Val Asn Asn Met Asn Ser Val Asn  
 660 665 670

Asn Ile Asn Asn Val Asn Asn Ile Asn Asn Val Asn Asn Ile Asn Asn  
 675 680 685

Val Asn Asn Ile Asn Asn Val Asn Asn Ile Asn Asn Val Asn Asn Ile  
 690 695 700

Asn Asn Val Asn Asn Ile Asn Asn Val Asn Asn Met Asn Asn Met Phe  
 705 710 715 720

Asn Val Asn Pro Gln Leu Asn Ile Met Gly Ile Met Lys Asp Ile Asn

725										730				735			
Asn	Asn	Asn	Ile	Thr	Val	Ser	Asn	Lys	Asn	Lys	Leu	Met	Asn	Asn	Tyr		
			740					745					750				
Ile	Asn	Asp	Asn	Asn	Ile	Met	Asn	Met	Glu	Gly	Ser	Ile	Asn	Glu	Thr		
		755					760					765					
Tyr	Asn	Phe	Asp	Gly	Thr	Leu	Asn	Asn	Lys	Asn	Val	Ser	Asn	Asn	Asn		
	770					775					780						
Asn	Asn	Asp	Ile	His	Asp	Lys	Gly	Val	Leu	Asn	Thr	Leu	Asn	Arg	Ser		
785					790					795					800		
Lys	Ser	Ser	Ser	Tyr	Ile	Lys	Pro	His	Arg	Asn	Leu	Thr	Leu	Pro	Ile		
				805					810					815			
Asn	Met	Tyr	Met	Asn	Asn	Thr	Tyr	Met	Tyr	Asn	Ser	Lys	Ala	Tyr	Val		
			820					825					830				
Asn	Tyr	Glu	Asn	Gln	Asn	Trp	Met	Ala	Gln	Gln	Asp	Cys	Asn	Asp	Lys		
		835					840					845					
Asn	Gly	Leu	Ser	Leu	Asn	Glu	Gly	Pro	Arg	Tyr	Asn	Asp	Asn	Asn	Asn		
	850					855					860						
Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn		
865					870					875					880		
Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	His	Ser	Ile	Ile	Asn		
				885					890					895			
Asn	Asn	Ile	Thr	Gln	Gly	Ile	His	Arg	Gly	Ser	Met	Ile	Asn	Asn	Gln		
			900					905					910				
His	Phe	Asp	Glu	Leu	Ser	Tyr	Asn	Pro	Asn	Gly	Ile	Phe	Leu	Glu	Lys		
		915					920					925					
Asn	Thr	Ile	Thr	Asn	Tyr	Asn	Glu	Met	Leu	Gly	Ser	Gly	Tyr	Asn	Asn		
	930					935					940						
Met	Tyr	Asp	Lys	Asn	Ala	Val	Lys	Gly	Asn	Met	Asn	Leu	Ile	Gly	Lys		
945					950					955					960		
His	Ser	Asn	Tyr	Asp	Leu	Met	Lys	Asn	Gly	Asn	Met	Ile	Asn	Gly	Tyr		
				965					970					975			
Lys	Leu	Asn	Met	Gln	Glu	Val	Gln	Lys	Gly	Met	Asn	Glu	Val	Gly	Lys		
			980					985					990				
Lys	Arg	Ala	Pro	Arg	Arg	Arg	Ala	Lys	Thr	Ile	Asn	Leu	Lys	Ser	Ile		
		995					1000					1005					
Asn	Arg	Phe	Asn	Thr	Val	Ser	Leu	Gly	Leu	Lys	Gly	Asn	His	Asn	Met		
	1010					1015					1020						
Glu	Asn	Met	Asn	Asn	Met	Asp	Asn	Met	Asp	Asn	Met	Asn	Asn	Met	Ile		
1025					1030					1035					1040		
Asn	Val	Ser	Asn	Val	Asn	Asn	Val	Asn	Asn	Met	Asn	Asn	Val	Asn	Asn		
				1045					1050					1055			
Val	Asn	Asn	Met	Asn	Asn	Val	Asn	Asn	Met	Asn	Asn	Val	Asn	Asn	Met		
			1060					1065					1070				
Asn	Asn	Val	Asn	Ser	Val	Asn	Asn	Met	Asn	Asn	Thr	Asn	Asn	Met	Asn		
		1075					1080					1085					
Asn	Met	Asn	Asn	Val	Asn	Ser	Val	Asn	Asn	Met	Asn	Asn	Thr	Asn	Asn		
	1090					1095						1100					



Met Asn Asn Met Asn Asn Thr Asn Asn Met Asn Asn Met Asn Arg Met  
1105 1110 1115 1120

Asn His Ile Asp Asn Asn Met Val Thr Asn Leu Asn Tyr Met Asp Asn  
1125 1130 1135

Lys Ile Asn Asn Ala Gly Asn Asn Leu Asn Gly Glu Phe Ser Lys Arg  
1140 1145 1150

Ile Leu Tyr Asn Arg Ser Lys Ser Thr Glu Asn Ile Lys Glu Met Met  
1155 1160 1165

Gln Pro His Asn Glu Ala Asn Asn Ile Ser Gly Asn Asn Thr Ser Asp  
1170 1175 1180

Ser Asn Asn Ile Thr Leu Asn Lys Asn Leu Val Glu Met Ile Leu Arg  
1185 1190 1195 1200

Asn Asn Lys Pro Ser Ile Asp Lys Asn Ile His Glu Ser Val Asn Arg  
1205 1210 1215

Ser Tyr Thr Ser Phe Leu Met Asn Ile Gly Ser Ser Tyr Leu Lys Lys  
1220 1225 1230

Lys Lys Thr Ala Glu Ile Lys Thr Gly Glu Asn Asn Thr Glu Asn Asn  
1235 1240 1245

Lys Gly Ile Val Asn Val Asn Ser Gln Val Glu Glu Lys Gly Lys Ser  
1250 1255 1260

Glu Asn Lys Ser Ile Leu Glu Ile Lys Lys Glu Gly Gln Ile Lys Asn  
1265 1270 1275 1280

Val Ile Tyr Asn Asn Asn Asn Asn Asn Asn Glu Lys Asp Gln Asn Ala  
1285 1290 1295

Asp Gln Tyr Gln Asp Gln Asn Lys Asn His Lys Gln Asp Gln Arg Gln  
1300 1305 1310

Asp Gln Asn Lys Ser His Lys Gln Asp Gln Leu His Asp Gln Asn Gln  
1315 1320 1325

Asn Gln Gly Gln Leu His Asp Gln Asn Gln Asn Gln Gly Gln Leu His  
1330 1335 1340

Asp Gln Asn Gln Asn Gln Gly Gln Leu His Asp Gln Asn Ile Asn Gln  
1345 1350 1355 1360

Gly Gln Leu Gln Asn Gln Asn Gln Asn Tyr Tyr Gln Asn Tyr Tyr Gln  
1365 1370 1375

Asn His Tyr Gln Asn Asp His Gln Asn Asp His Gln Asn Asp His Gln  
1380 1385 1390

Asn Asp His Gln Asn His Tyr Gln Asn Asn His Gln Asn Asp His Gln  
1395 1400 1405

Asn Asp His Gln Asn Asp His Gln Asn Asp His Gln Asn His Tyr Pro  
1410 1415 1420

Tyr Gln Tyr Gln Asp Gln Gly Val Ser Lys Glu Ile Asn Asn Lys Glu  
1425 1430 1435 1440

Ile Glu Glu Asn Ile Asn Lys Leu Asn Glu Glu Ser Asp Glu Asn Asn  
1445 1450 1455

Asn Leu Glu Ile Leu Asp Glu Glu Glu Ile Thr Asn Lys Ser Val Ile  
1460 1465 1470

Ser Asn Thr Met Asn Met Val Glu Leu Lys Asn Glu Asn Lys Asn Glu  
 1475 1480 1485  
 Met Met Ile Asn Asp Ile Lys Lys Glu Glu Glu Ile Ser Ala Gln Ile  
 1490 1495 1500  
 Val Glu Pro Val Lys Lys Arg Gly Arg Lys Lys Gly Ser Lys Phe Val  
 1505 1510 1515 1520  
 His Lys Asn Ile Thr Asn Glu His Ile Leu Ser Gln Leu Lys Glu Pro  
 1525 1530 1535  
 Lys Arg Lys Gly Arg Lys Arg Lys Ile Trp Ile Gln Pro Leu Asp Asn  
 1540 1545 1550  
 Tyr Asn Lys Val Glu Asp Asn Lys Leu Lys Glu Tyr Thr Asn Asn Ile  
 1555 1560 1565  
 Asp Ile Arg Asp Asp Asn Lys Ala Asn Thr Gln Asn Glu Asp Val Thr  
 1570 1575 1580  
 Thr Asn Asn Val Thr Thr Leu Cys Cys Asn Lys Lys Ala Lys Tyr Glu  
 1585 1590 1595 1600  
 Ser Met Asn Pro Asn Ser Ile Arg Asn Met Phe Ile Leu Leu Arg Asn  
 1605 1610 1615  
 Lys Leu Ser Asn Leu Asn Val Lys Asn Thr Met Asn Ser His Ser Glu  
 1620 1625 1630  
 Ile Asn Met Leu Ile Asn Asn Phe Ile Tyr Ile Leu Lys Ile Met Asn  
 1635 1640 1645  
 Lys His Lys Gln Met Leu Glu Asn Ile Tyr Thr Ile Asn Phe Thr Asn  
 1650 1655 1660  
 Ile Asp Asp Ile Cys Val Arg Asn Tyr Leu Glu Lys His Phe Pro Phe  
 1665 1670 1675 1680  
 Ile Lys Gly Tyr Arg Asn Lys Tyr Glu Ile Thr Asp Asp Leu Phe Met  
 1685 1690 1695  
 Gln Gly Asn Asp Asp Asn His Leu Ser Lys Asp Ile Asn Cys Ile Asn  
 1700 1705 1710  
 Gly Asn Glu Asp Ile Gly Leu Asn Ala Ser Cys Glu Gln Asn Glu Glu  
 1715 1720 1725  
 Asn Glu Asn His Glu Lys Ser Asp Met Tyr Asn Tyr Lys Asn Asp Asn  
 1730 1735 1740  
 Ser Ile Thr Asn Met Glu Lys Ser Pro Asn Asn Ile Thr Leu Val His  
 1745 1750 1755 1760  
 Lys Asn Ile Lys Asp Glu Asp Asn Phe Glu Thr Ile Phe Leu Lys Thr  
 1765 1770 1775  
 Arg Ser Ser Phe Ser Ser Val Asp Ser Asn Ile Ile His Ile Asp Asn  
 1780 1785 1790  
 Thr Gln Asn Phe Lys Leu Ser Asn Ser Ser Glu Asn Lys Leu Asn Gln  
 1795 1800 1805  
 Phe Glu Lys Lys Thr Val Leu Leu Ser Asn Asp Ile Leu Tyr Asp Ala  
 1810 1815 1820  
 Lys Lys Glu Ile Glu Gln Ser Tyr Met Asn Ser Gln Glu Lys Glu Lys  
 1825 1830 1835 1840  
 Asn Tyr Leu His

<210> 108  
 <211> 266  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 108  
 Met Tyr Thr Phe Asp Asp Thr Ser Phe Tyr Ile Phe Leu Leu Asn Lys  
 1 5 10 15  
 Ile Leu Leu Arg Arg Tyr Phe Ser Ser Asp Asn Ile Phe Asn Lys Asn  
 20 25 30  
 Val Lys Asn Gly His Thr Leu Leu Leu Tyr Asn Lys Ile Arg Asn Asn  
 35 40 45  
 Leu Val Leu Lys Lys Tyr Val Ser Ser Ser Ile Phe Asp Val Phe Asp  
 50 55 60  
 Lys Ile Lys Asp Ser Asn Asn Lys Glu His Asp Glu Thr Thr Asp Glu  
 65 70 75 80  
 Asn Ile Asn Lys Lys Arg Lys Pro Ser Lys Lys Val Leu Lys Leu Val  
 85 90 95  
 Asp Glu Ile Leu Asn Leu Thr Leu Ile Glu Ala Ala Asp Leu Cys Asp  
 100 105 110  
 Leu Cys Gln Glu Lys Leu Glu Gly Asn Gln Lys Phe Asn Asn Ser Phe  
 115 120 125  
 Phe Ile Asn Arg Asn Pro Phe Pro His Pro Ser Asn Phe Phe Gly Ala  
 130 135 140  
 Asn Gln Asn Ile Phe Pro Gln Pro Thr Ala Gln Asn Ala Met Asn Ile  
 145 150 155 160  
 Asn Thr Asn Leu Val Asn Asp His Thr Thr Cys Thr Thr Asp Ser Thr  
 165 170 175  
 Leu Tyr Ser Lys Glu Glu Lys Ser Glu Lys Lys Lys Asn Glu Glu Lys  
 180 185 190  
 Lys Asn Thr Lys Ser Thr Phe Asn Val Lys Leu Glu Lys Phe Asp Val  
 195 200 205  
 Lys Asn Lys Ile Asn Thr Ile Lys Glu Ile Arg Lys Ile Thr Asn Val  
 210 215 220  
 Gly Leu Lys Glu Ala Lys Asp Met Val Glu Ser Ala Pro Phe Tyr Ile  
 225 230 235 240  
 Gln Lys Ser Val Pro Ser Glu Lys Ala Glu Glu Met Lys Lys Ser Phe  
 245 250 255  
 Glu Gln Leu Gly Ala Thr Ile Ile Leu Glu  
 260 265

<210> 109  
 <211> 427  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 109  
 Met Glu Asp His Asp Ala Asn Val Glu Gln Trp Lys Ile Lys Arg Leu  
 1 5 10 15

Ile	Lys	Lys	Leu	Glu	Asn	Ala	Lys	Gly	Asn	Gly	Thr	Ser	Met	Ile	Ser
			20					25					30		
Leu	Ile	Ile	Lys	Asn	Lys	Asp	Glu	Val	Ser	Arg	Ile	Asn	Lys	Met	Leu
		35					40					45			
Ala	Asp	Glu	Leu	Gly	Thr	Ala	Ser	Asn	Ile	Lys	Ser	Arg	Val	Asn	Arg
	50					55					60				
Leu	Ser	Val	Leu	Ser	Ala	Ile	Thr	Ser	Thr	Gln	Gln	Lys	Leu	Lys	Leu
65					70					75					80
Tyr	Asn	Lys	Thr	Pro	Pro	Lys	Gly	Leu	Val	Val	Tyr	Cys	Gly	Thr	Val
				85					90					95	
Ile	Thr	Glu	Asp	Gly	Lys	Glu	Lys	Lys	Met	Ser	Ile	Asp	Phe	Glu	Pro
			100					105					110		
Phe	Arg	Pro	Ile	Asn	Thr	Ser	Leu	Tyr	Leu	Cys	Asp	Asn	Lys	Phe	His
		115					120					125			
Val	Glu	Ala	Leu	Lys	Glu	Leu	Leu	Glu	Ser	Asp	Asp	Lys	Phe	Gly	Phe
	130					135					140				
Ile	Ile	Val	Asp	Gly	Asn	Gly	Ala	Leu	Phe	Gly	Thr	Ile	Gln	Gly	Asn
145					150					155					160
Thr	Arg	Glu	Val	Ile	Arg	Arg	Phe	Thr	Val	Asp	Leu	Pro	Lys	Lys	His
				165					170					175	
Gly	Arg	Gly	Gly	Gln	Ser	Ala	Leu	Arg	Phe	Ala	Arg	Leu	Arg	Leu	Glu
			180					185					190		
Lys	Arg	His	Asn	Tyr	Val	Arg	Lys	Val	Ala	Glu	Val	Ala	Thr	Ser	Val
		195					200					205			
Phe	Ile	Thr	Asn	Asp	Lys	Val	Asn	Val	Thr	Gly	Ile	Val	Leu	Ala	Gly
	210					215					220				
Ser	Ala	Asp	Phe	Lys	Asn	Asp	Leu	Leu	Asn	Ser	Asp	Met	Phe	Asp	Gln
225					230				235						240
Arg	Leu	Phe	Ala	Lys	Val	Ile	Lys	Ile	Val	Asp	Ile	Ser	Tyr	Gly	Gly
				245					250					255	
Asp	Asn	Gly	Phe	Asn	Gln	Ala	Ile	Glu	Leu	Ser	Ser	Glu	Ala	Leu	Gln
			260					265					270		
Asn	Val	Lys	Phe	Ile	Gln	Glu	Lys	Lys	Leu	Ile	Gly	Lys	Phe	Phe	Glu
		275					280					285			
Glu	Ile	Ala	Gln	Asp	Thr	Gly	Lys	Val	Val	Tyr	Gly	Ile	Asp	Asp	Thr
	290					295					300				
Leu	Lys	Ala	Leu	Glu	Ile	Gly	Ala	Val	Glu	Leu	Leu	Ile	Leu	Tyr	Glu
305					310					315					320
Gly	Leu	Asp	Ile	Ile	Arg	Leu	Thr	Thr	Lys	Asn	Pro	Val	Thr	Asn	Gln
				325					330					335	
Thr	Lys	Thr	Met	His	Ile	Ser	Pro	Cys	Asp	Glu	Lys	Gln	Glu	Ser	Leu
			340					345					350		
Tyr	Lys	Glu	Asn	Asn	Val	Glu	Leu	Glu	Val	Val	Glu	Lys	Ile	Ser	Leu
		355					360					365			
Thr	Asp	Trp	Val	Ile	Gly	Asn	Tyr	Lys	Lys	Tyr	Gly	Ala	Ser	Leu	Asp
	370					375					380				
Phe	Val	Thr	Asn	Lys	Ser	Gln	Glu	Gly	Ala	Gln	Phe	Gln	Lys	Gly	Phe

385                      390                      395                      400

Gly Gly Phe Gly Gly Met Leu Arg Tyr Lys Ile Asp Leu Asn Leu Tyr  
                                  405                      410                      415

Asp Glu Asp Val Glu Ser Asp Val Glu Leu Phe  
                                  420                      425

<210> 110  
 <211> 3973  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 110  
 Met Arg Lys Glu Tyr Ile Ser Asn Lys Lys Val Tyr Glu Leu Leu Ser  
   1                                  5                                  10                                  15

Gln Gly Thr Tyr Glu Gly Tyr Glu Glu Glu Ile Lys Thr Ile Phe Glu  
                                   20                                  25                                  30

Arg Arg Tyr Met Asn Ile Leu Ser Tyr Leu Cys Pro Pro Asn Lys Arg  
                                   35                                  40                                  45

Ser Phe Glu Asp Glu Ile Ile Ser Leu Lys Ile Gln Lys Tyr Ile Asn  
   50                                  55                                  60

Glu Tyr Leu Ser Phe Ser Asn Ser Thr Ser Tyr Phe Phe Gly Phe Ser  
   65                                  70                                  75                                  80

Lys Glu Leu Ile Phe His Cys Leu Lys Ile Tyr Phe Thr Asp Ile Lys  
                                   85                                  90                                  95

Tyr Glu Glu Val Asp Val Met Lys Ser Cys Lys His Val Ser Met Met  
                                   100                                  105                                  110

Asp Ser Glu Asp Thr Tyr Asn Asn Asn Asn Asn Asn Asn Asp Asp  
                                   115                                  120                                  125

Asp Asp Lys Tyr Asn Ile Glu Ser Asp Glu Glu Leu Ile Glu Arg Ile  
   130                                  135                                  140

Lys Lys Asn Ala Asp Ala Leu Asn Met Glu Lys Leu His Leu Leu Tyr  
   145                                  150                                  155                                  160

Cys Asp Glu Tyr Phe Tyr Ile Phe Lys Asn Ile Leu Tyr Val Leu Lys  
                                   165                                  170                                  175

Arg Cys Glu Val Phe Tyr Phe Tyr Thr Asn Tyr Lys Val Glu Glu Phe  
                                   180                                  185                                  190

Ser Tyr Glu Lys Asn Phe Leu Tyr Asp Ile Phe Tyr Ile Ile Glu Lys  
   195                                  200                                  205

Lys Ile Asn Ile Gln Asp Leu Ile Gln Ile Tyr Tyr Asp Thr Tyr Lys  
   210                                  215                                  220

Asp Thr Asn Asn Tyr Phe Asp Leu Leu Lys Asn Met Asp Ile Glu Asn  
   225                                  230                                  235                                  240

Ile Val Trp Ile Tyr Lys Tyr Ile Leu Leu Phe Leu Asn Ile Gln Ile  
                                   245                                  250                                  255

Tyr Cys Ile Asn Ile Phe Leu Tyr Leu Gln Leu Arg Leu Asn Ile Leu  
                                   260                                  265                                  270

Ser Gln Ser Asn Ile Lys Ser Tyr Leu His Ile Phe Leu Thr Phe Pro  
   275                                  280                                  285

Lys Leu Ser Leu Ser Asn Thr Tyr Met Asn Glu Asp Ile Ile Thr Ser  
                                   290

290					295					300					
Thr 305	Leu	Gln	Gln	Lys	Glu 310	Tyr	Ser	Val	Ile	Phe 315	Phe	Ile	Cys	Ser	Leu 320
Cys	Asn	Ile	Ile	Thr 325	Tyr	Glu	Asp	Ile	His 330	Lys	Tyr	Val	Asn	Cys	Cys 335
Leu	Ser	Ile	Asn 340	Leu	Phe	Lys	Leu	Phe 345	Phe	Phe	Phe	Lys	Lys 350	Asn	Tyr
His	Thr	Asn 355	Asp	Asn	Arg	Asn	Tyr 360	Tyr	Glu	His	Asn	Ile 365	Lys	Met	Leu
Ser	Gly 370	Ser	Leu	His	Tyr	Phe 375	Leu	Asp	Ile	Leu	Lys 380	Asn	Phe	Ile	Phe
Ile 385	Asn	Asp	Asn	Phe	Val 390	Tyr	Lys	Arg	Ile	Leu 395	Ile	Gln	Ile	Leu	Glu 400
Asn	Ser	Leu	Cys	Thr 405	Tyr	Ser	Ile	Gln	Pro 410	Val	Asp	Phe	His	Asn 415	Met
Leu	Phe	Asp	Ser 420	Met	Gly	Phe	Gly	Thr 425	Pro	His	Ser	Lys	Asn 430	Glu	Asn
Glu	Asn	Glu 435	Asn	Glu	Arg	Leu	Tyr 440	Arg	Arg	Asn	Val	Glu 445	Phe	Asn	Asp
Ala	Asp 450	Ile	Tyr	Lys	Lys	Asn 455	Gly	Asn	Ile	Lys	Asn 460	Val	Asn	His	Gly
Cys 465	Asp	Glu	His	Asp	Gly 470	Asn	Val	Ser	Tyr	Phe 475	Gln	Thr	Pro	Asn	Thr 480
Thr	Asn	Asp	Tyr 485	Asn	Lys	Glu	Leu	Gln	Asn 490	Glu	Glu	Tyr	Asn	Leu 495	Asp
Val	Ser	Asn 500	Leu	Asn	Asn	Met	Phe	Glu 505	Asp	Glu	Asp	Arg	Tyr 510	Lys	Thr
Asn	Gln	Asp 515	Val	Asn	Ile	Asn	Ile 520	Asn	Ile	Ser	Leu	Val 525	Lys	Asn	Met
Lys 530	Lys	His	Ile	Glu	Gln	Lys 535	Glu	Phe	Phe	Lys	Arg 540	Asn	Ile	Asn	Lys
Asn 545	Leu	Phe	Leu	Asn	Val 550	Cys	Ile	Leu	Leu	Phe 555	Lys	Lys	Gln	Asn	Phe 560
Leu	Leu	Tyr	Thr 565	His	Asp	Ile	Lys	Lys	Glu 570	Tyr	Lys	Asn	Ile	Asn 575	Thr
Cys	Leu	Glu 580	Tyr	Leu	Gln	Asn	Asp 585	Asn	Tyr	Gln	Tyr	Asp	Ile 590	Tyr	Ser
Leu	Lys	Tyr 595	Phe	Leu	His	Asn	Tyr 600	Asp	Tyr	Lys	Glu	Thr 605	Glu	Ile	Ile
Thr 610	Asn	Phe	Lys	Glu	Lys	Glu 615	Lys	Ser	Leu	Cys	Pro 620	Phe	Ile	Ser	Val
Glu 625	Ser	Lys	Asn	Ile	Leu 630	Leu	Glu	Ile	Ser	Ser 635	Leu	Phe	Phe	Ser	Phe 640
Asp	Tyr	Leu	Lys	Ala 645	Tyr	Thr	Glu	Glu	Asn 650	Asn	Ile	Tyr	Gly	Asp 655	Asn
Asn	Lys	Lys	Asn 660	Phe	Lys	Ile	Asn	Asn	Ile 665	Tyr	Asn	Ile	Ile 670	Asp	Lys

Glu Lys Lys Lys Asn Glu Ile Lys Lys Lys Asn Asn Asn Glu Met Lys  
 675 680 685  
 Ile Glu Arg Lys Lys Glu Lys Asn Asn Asn Glu Met Lys Ile Glu Ile  
 690 695 700  
 Asn Lys Glu Lys Asn Phe Ile Asp Asn Thr Ile Leu His Pro Val Ile  
 705 710 715 720  
 Leu Tyr Asn Val Asn Arg Leu Leu Leu Asp Phe Phe Tyr Asp Lys Ile  
 725 730 735  
 Ser Lys Ala Ser Ile Gln Thr Leu Ile Ile Phe Asn His Asn Leu Leu  
 740 745 750  
 Ser Ile Tyr Arg Ile Leu Lys Thr Leu Ile Gly Thr Asn Thr Asn Leu  
 755 760 765  
 Ile Asn Phe Asn Glu Val Thr Lys Ile Val Glu Lys Leu Ala Gln Glu  
 770 775 780  
 Glu Gly Asn Ile Thr Lys Lys Asn His Lys Asn Ile His Met Val Ile  
 785 790 795 800  
 Leu Glu Asp Thr Leu Tyr Tyr Lys Ile Ile Tyr Ile Leu Arg Lys Lys  
 805 810 815  
 Asn Ile Asn Lys Asp Thr Ile Tyr Ile Thr Tyr Ile Glu Tyr Tyr Tyr  
 820 825 830  
 Ile Leu Leu Asp Tyr Phe Cys Lys Tyr Phe Tyr Asn Asn Met Asp Asn  
 835 840 845  
 Tyr Phe Lys Tyr Asn Tyr Met Lys Lys Ser Thr Val Arg Lys Lys Tyr  
 850 855 860  
 Val Lys Asn Lys Asn Ile Asn Asp Thr Lys Gly His Asn Lys Asn Asn  
 865 870 875 880  
 Asn Asn Asn Asn Asn Ile Tyr Gly Asp Asp Asp Asp Asn Asn Ile Tyr  
 885 890 895  
 Cys His Asp Asp Asp Asp Ile Tyr Cys His Asp Asp Asp Asp Ile Tyr  
 900 905 910  
 Cys His Asp Asp Asp Asp Asn Ile Phe Ile Phe Phe Glu Lys Ile  
 915 920 925  
 Val Ile Phe Phe Cys Asn Ile Leu Gln Ile Asn Lys Cys Phe His Ile  
 930 935 940  
 Leu Ile Glu Ile Lys Leu Asn Tyr Tyr Phe Lys Ile Pro Tyr Asp Ile  
 945 950 955 960  
 Lys Asn Thr Phe Ile Asn Leu Phe Thr Tyr Leu Phe Phe Phe Ser Leu  
 965 970 975  
 Lys Val Gln Glu Phe Ser Arg Phe Gln Ile Met Ile Val Arg Cys Leu  
 980 985 990  
 Ser Phe Leu Leu Lys Lys Lys Asn Ile Asn Lys Leu Asn Ala Tyr Ile  
 995 1000 1005  
 Phe Gln Leu Phe Ser Tyr Leu Glu Asn Asp Gln Ile Asn Ile Asn Glu  
 1010 1015 1020  
 Lys Gly Met Val His Arg Lys Ser Ser Lys Tyr His Arg Asn Asn Gln  
 1025 1030 1035 1040

Glu Glu Tyr Ser His Asn Asn Lys Thr Asn Asp Asn Ser Val Ser Asn  
 1045 1050 1055  
 Leu Tyr Arg Asp Ile Glu Asn Glu Tyr Asp Glu Asn His Leu Glu Arg  
 1060 1065 1070  
 Arg Lys Asp Arg Asn Val Phe Ser Ser Asn Met Asn Asp Lys Lys  
 1075 1080 1085  
 Tyr Asn Asn Leu Ser Asp Phe Lys Tyr Thr Lys Glu Asn Met Asp Ile  
 1090 1095 1100  
 Lys Glu Asn Phe Arg Ile Asp Ile Ser Phe Leu Lys Ile Phe Phe Leu  
 1105 1110 1115 1120  
 Leu Asn Asp Val Arg Gln Ile Asn Leu Asn Glu Ser Asn Gly Arg Lys  
 1125 1130 1135  
 Asp Lys Leu Glu Ser Lys Ala Lys Arg Arg Ile Gln Lys Leu Asp Val  
 1140 1145 1150  
 His Arg Tyr Thr Tyr Asn Glu Asn Asp Asn Asn Lys Tyr Asn Asp Gly  
 1155 1160 1165  
 Asn Thr Phe Leu Ser Ser Gln Asp Glu Glu Lys Ser Lys Ser Phe Asp  
 1170 1175 1180  
 Ser Ser Asp Ser Cys Ser Val Asp Glu Lys Glu Ser Ser Lys Gly Leu  
 1185 1190 1195 1200  
 Tyr Gly Asn Asp Phe Val Asn Ser Ser Asp His Asn Asn Asn Ser Ser  
 1205 1210 1215  
 Asn Asn Ser Ser Asn Asn Ser Ser Asn Asn Ser Ser Asn Asn Ser Ser  
 1220 1225 1230  
 Ser Gly Arg Asn Asn Ser Ser Asp Glu Val Val Val Asp Pro Tyr Asp  
 1235 1240 1245  
 Tyr Asn Asn Tyr Tyr Glu Cys Lys Asp Ser Asn Lys Phe Gly Val Val  
 1250 1255 1260  
 Val Asn Tyr Phe Tyr Ala His Leu Pro Asn Phe Glu Lys Ser Tyr Asn  
 1265 1270 1275 1280  
 Ile Asn Tyr Val Val Glu Asp Ile Ser Phe Asp Asp Ile Phe Leu Ile  
 1285 1290 1295  
 Ser Ile Met Asp Leu Trp Glu Thr Asn Asn Asn Asn Asn Leu Leu Asn  
 1300 1305 1310  
 Leu Ile Asn Asp Leu Leu Lys Ile Tyr Glu Glu Glu Lys Lys Lys Lys  
 1315 1320 1325  
 Ile Tyr Ile Cys Thr Ser Leu Leu Leu Lys Ile Phe Lys Arg Ile Ile  
 1330 1335 1340  
 Lys Lys Lys Ser Asn Ser Tyr Phe Leu Phe Asn Ile Tyr Lys Ala Phe  
 1345 1350 1355 1360  
 Glu Asn Asp Ile Lys Leu Ile Leu Asp Ser Ile Asn Ile Leu Ile Lys  
 1365 1370 1375  
 Lys Trp Val Val Trp Thr Phe Lys Asn Cys Asp Asn Ile Phe Asn Arg  
 1380 1385 1390  
 Glu Lys Asn Ile Asn Ile Lys Lys Leu Val Lys Leu Phe Phe Ile Ser  
 1395 1400 1405  
 Phe Tyr Lys Tyr Leu Lys Asn Tyr Phe Leu Gln Ile Tyr Tyr His Phe



1410	1415	1420
Phe Tyr Asn Asn Gln Ile Tyr Asn Arg Lys Asn Tyr Asn Phe Asp Asn 1425 1430 1435 1440		
Phe Phe Phe Ser Ile Phe Ser Lys Tyr Ile Asn Lys Ile Phe Val Glu 1445 1450 1455		
Ile Tyr Ser Ser Ser Ser Ser Ser Thr Ser Ser Asn Ser Ser Phe Val 1460 1465 1470		
Phe Asn Val Ser Lys Phe Tyr Met Met Lys Met Cys Ile Ser Ile Ile 1475 1480 1485		
Asn Asn Met Ile Gly Val Val Lys Tyr Ile Asn Leu Glu Arg Val Lys 1490 1495 1500		
Gln Val Phe Tyr Glu His Asn Ile Met Met Asp Val His Met Lys Ser 1505 1510 1515 1520		
His Leu His His Asp Ile Asp Val Tyr Tyr Gly His Asp Asn Ser Tyr 1525 1530 1535		
Asn Asn Ile Tyr Gln Lys Ile Ile Lys Ser Tyr Arg Gly Glu Glu Lys 1540 1545 1550		
Asp Thr Leu Asp Val Ile Asn Thr Glu Ser Val His Gln Asn Arg Asn 1555 1560 1565		
Glu Asp Asp Ile Asp Gly Ser Ile Asn Ser Leu Asp Val Phe Asn Glu 1570 1575 1580		
Ile Met Arg Asn Ile Ile Ile Asn His Asn Ser Leu Ile Lys Asp His 1585 1590 1595 1600		
Asn Asp Met Cys Thr Lys Lys Lys Arg Ile Asn Ile Phe Gln Ile Ser 1605 1610 1615		
Ser Pro Ala Thr Ser Glu Gln Leu Met Asn Asn His Tyr Thr Met Asn 1620 1625 1630		
Tyr Leu Thr Asp Val Met Leu Leu Gln Lys Asp Tyr Ile Tyr Asn Ile 1635 1640 1645		
Asp Asn Asn Met Asn Glu His Lys Gln Asn Val Phe Asn Lys Pro Phe 1650 1655 1660		
Asp Asn Asn Asn Asn Asn Asn Asn Asn Asn Phe Met Leu Asn Tyr 1665 1670 1675 1680		
Phe Asn Tyr Ile Pro Glu Asn Asn Asn Asn Asn Tyr Arg Met Asp Ile 1685 1690 1695		
Lys Lys Arg Tyr Pro Pro Glu Ser Tyr Asp Asn Asn Tyr Tyr Met Phe 1700 1705 1710		
Asn Asn Ile Lys Asn Glu Glu Glu Asn Ile Leu Leu Gln Asn Asn Ser 1715 1720 1725		
Met Ser Ser Ser Ile Tyr Ile Asp Lys Lys Leu Met Lys Asp Thr Lys 1730 1735 1740		
Glu Met Glu Pro Leu Phe Asn Lys Thr Lys Asp Met Lys Asn Tyr Asn 1745 1750 1755 1760		
Glu Glu Gln Lys Asn Asn Glu Leu Ile Ser Tyr Pro Tyr Asn Asn Met 1765 1770 1775		
Leu Gln Asn Asn Ile Ile Phe Val Lys Phe Phe Leu Tyr Thr Gln Asn 1780 1785 1790		

Leu Leu Gln Ile Ile Phe Gln Asn Asn Tyr Ile Phe Phe Leu Ser Asp  
 1795 1800 1805  
 Phe Leu Phe Ile Asn Tyr Lys Lys Lys Glu Tyr Ile Glu Glu Lys Lys  
 1810 1815 1820  
 Asn Gly Asn Gln Asn Val Ile Asn Ile Lys Asp Glu Asp Lys His Ile  
 1825 1830 1835 1840  
 Thr Asn Ile Lys Asp Gly Asp Lys His Ile Thr Asn Ile Lys Asp Gly  
 1845 1850 1855  
 Asp Lys Asn Ile Thr Asn Ile Lys Asp Asp Asp Lys Asn Ile Thr Asn  
 1860 1865 1870  
 Met Lys Lys Lys Asn Asn Lys Asn Tyr Leu Thr Ile Leu Met Tyr Asn  
 1875 1880 1885  
 Ser Gln Glu Cys Ser Phe Tyr Tyr Ser Ile Phe Asn Thr Leu Ile Asn  
 1890 1895 1900  
 Asp Tyr Asn Phe Leu Tyr Tyr Lys Asp Tyr Lys Ser Ser Cys Phe Leu  
 1905 1910 1915 1920  
 Tyr Glu Ser Leu Asn Thr Phe Phe Lys Ile Asn Asn Phe Asn Asn Ile  
 1925 1930 1935  
 Tyr Phe Leu Cys Lys Tyr Ser Ser Gly Tyr Leu Pro Leu Glu Arg Ile  
 1940 1945 1950  
 Ile Lys Leu Phe Met Asp Val Ile Phe Gly His Phe Ile Lys Phe Ile  
 1955 1960 1965  
 Asn Ile Asn Glu Asn Ile Asn Asp Tyr Glu Leu Leu Glu Val Leu Glu  
 1970 1975 1980  
 Tyr Asn Gly Asn Lys Cys Tyr Glu Leu Leu Arg Phe Leu Phe Phe Phe  
 1985 1990 1995 2000  
 Ile Lys Gln Asn Asp Leu Ile Thr Ile Asn Ile Tyr Lys Tyr Ile Phe  
 2005 2010 2015  
 Asp Ile Ile Met Cys Ile Leu Glu Gln Tyr Ile Ala His Val Asn Tyr  
 2020 2025 2030  
 Tyr Ile Tyr Lys Gly Lys Ala Trp Asp Val Phe Phe Asn Lys Leu Lys  
 2035 2040 2045  
 Ile Leu Asn Leu Ser Leu His Phe Val Asn Ser Ile Tyr Phe Asn Ile  
 2050 2055 2060  
 Phe Cys Asp Asp Ile Asn Ala Glu Ile Lys Arg Glu Asn Asp Asn Asn  
 2065 2070 2075 2080  
 Lys Ser Asn Asp Asn Asn Asn Lys Asn Asn His Asn Asn Asn Asn Asn  
 2085 2090 2095  
 Lys Asn Asn His Asn Asn Asn Asn Asn Lys Asn Asn Glu Lys Thr Gln  
 2100 2105 2110  
 Asn Val Asp Glu Gln Arg Arg Ser Arg Leu Trp Asn Ile Val Glu Cys  
 2115 2120 2125  
 Leu Phe Tyr Asn Val Ile Asn Lys Leu His Val Asn Ser Ile Asn Cys  
 2130 2135 2140  
 Leu Lys Lys Asn Lys Leu Gly Ser Tyr Lys Cys Asp Glu Glu Phe Pro  
 2145 2150 2155 2160

Lys Glu Leu Asn Cys Lys Arg Tyr Phe Leu Asn Tyr Asn Lys Asp Phe  
 2165 2170 2175  
 Lys Lys Glu Ile Tyr Tyr Tyr Leu Tyr Asn Leu Asn Ile Ala Ser Glu  
 2180 2185 2190  
 Ile Phe Glu Leu Ile Ile Lys Ala Ile Tyr Ile Asn Glu Thr Lys Ile  
 2195 2200 2205  
 Tyr Pro Leu Ile Ile Asn Ile Cys Tyr Asp Arg Asn Ile Ser Asn Ile  
 2210 2215 2220  
 Phe Phe Asn Ile Asp Tyr Asp Asn Leu Asn Ser Ile Leu Glu Lys Tyr  
 2225 2230 2235 2240  
 Thr Tyr Leu His Lys Lys Lys Lys Asp His Ile Lys Asn Leu Lys Tyr  
 2245 2250 2255  
 Leu Leu Cys Lys Asn Lys Ser Ile His Met His Lys Tyr Ile Ser Tyr  
 2260 2265 2270  
 Ile Asp Asp Asp His Leu Ile Asn Asn Met Leu His Leu Leu Arg Arg  
 2275 2280 2285  
 Lys Asn Ile Tyr Tyr Lys Tyr Val Leu Asn Ile Asn Glu Tyr Asn Asn  
 2290 2295 2300  
 Phe Leu Asp Asn His Lys Cys Lys Arg Lys Arg Lys Phe Ile Asn Tyr  
 2305 2310 2315 2320  
 Asn Asn Ile Gln Ser Ser Tyr Asn Asn Asn Tyr Asn Ile Tyr Asn Asn  
 2325 2330 2335  
 Thr Asn Asn Phe Tyr Glu Tyr His Asp Tyr Ile Ala Ile Lys Asn Ile  
 2340 2345 2350  
 Leu His Lys Lys Ile Glu Leu Leu Asp Asp Asp Tyr Ile Cys Ser Arg  
 2355 2360 2365  
 Ile Leu Asp Thr Gln Ser Gln Lys Thr Tyr Gly Glu Lys Asn Tyr Leu  
 2370 2375 2380  
 Phe Asp Val Lys Asn Tyr Ile Tyr Asn Met Asn Phe Ile Asn Asn Asn  
 2385 2390 2395 2400  
 Tyr Gln Glu Asn Ser Tyr Ile Asn Asp Val Ile Asn Gly Lys Lys Lys  
 2405 2410 2415  
 Met Phe Thr Leu Gln Ile Ser Glu Tyr Asp Lys His Thr Asn Tyr Asn  
 2420 2425 2430  
 Ser Leu Phe Met Asp Cys Val Gln Asn His His Asn Ile Lys Lys Met  
 2435 2440 2445  
 Asn Ser Thr Asn Asn Met Asn His His Ile Asn Thr Asn Asn Asn Tyr  
 2450 2455 2460  
 Leu His Asn His Asn Phe Ile Ser Asn Tyr Asn Ser Phe Asn Val His  
 2465 2470 2475 2480  
 Asp Asn Lys Lys Ile Tyr Ser Tyr Asn Glu Asn Cys Lys Ser Asp Glu  
 2485 2490 2495  
 Ile Met Gln Lys Lys Ile Asp Met Ser Ile Trp Lys Asn Ile Asp Ser  
 2500 2505 2510  
 Ile Phe Pro Glu Thr Phe Ile Asp Ser Asp Lys Gln Pro Ala Tyr Asn  
 2515 2520 2525  
 Phe Asp Pro Ile Asp Ser Ile Asn Leu Gly Ser Ser Arg Ser Asn Asn  
 231

2530	2535	2540
Glu Lys Lys Lys Lys Tyr Ile Gln Ile Asp Asn Pro Val Lys Lys Glu 2545 2550 2555 2560		
Cys Leu Leu Leu Asn Ile Asn Tyr Asp Lys His Asp Ser Ile Val Tyr 2565 2570 2575		
Asn Lys Tyr Asp Asn Met Phe His Tyr Asp Glu Leu Pro Asp Ile Asn 2580 2585 2590		
Asn Asn Asn Asn Asn Asn Asn Asn Asp Asn Asn Asn Asn Thr Cys Val 2595 2600 2605		
Ile Glu Asp Ile Lys Asp Ile Tyr Glu Lys Arg Met Asn Lys Asn Thr 2610 2615 2620		
Lys Arg Asn Lys Glu Lys Lys Glu Lys Arg Lys Tyr Ile Phe Leu Asn 2625 2630 2635 2640		
Asn Phe Asn Asn Asn Lys Glu Lys Lys Met Lys Asn Asn Gln Lys Thr 2645 2650 2655		
Val Tyr Ser Asn Asn Asn Ile Met Gly Glu Glu Phe Tyr Asn Glu Phe 2660 2665 2670		
Tyr Leu His Asn Phe Lys Asn Glu Ile Lys Cys Met Lys Tyr Ile Asn 2675 2680 2685		
Leu Thr Gln Ser Leu Tyr Asp Val Lys Tyr Arg Leu Leu Leu Leu Phe 2690 2695 2700		
Tyr Lys Phe Ile Ile Ile Leu Lys His Lys Glu Leu Leu Gln Asn Glu 2705 2710 2715 2720		
Asn Tyr Ile Lys Glu Glu Lys Glu Phe Leu Lys Lys His His Ile Lys 2725 2730 2735		
Lys Asn Ile Pro Phe Leu Phe Phe Ile Tyr Glu Leu Met Ile Thr Phe 2740 2745 2750		
Phe Asn Thr Ala Glu Asn Ile Asn Lys Asn Thr Tyr Tyr Tyr Val Leu 2755 2760 2765		
Ile Ile Asn Ile Leu Val Asn Leu Phe Leu Phe Ile Asn Lys Arg Asp 2770 2775 2780		
Tyr Asp Asp Glu Thr Cys Met Ser Asn Ile Ile Asn Asn Asp Asn Asn 2785 2790 2795 2800		
Lys Lys Asn Lys Asn Asn Leu Ile Glu Asn Lys Asn Glu Ile Tyr Asn 2805 2810 2815		
Thr Asn Ile Lys Ser Leu Lys Asn Asp Lys Glu Tyr Ile Asp Asn His 2820 2825 2830		
Ser Asn Tyr Ala Met Phe Tyr Cys Asp Leu Phe Cys Asp Asp Phe Phe 2835 2840 2845		
Ile Ser Asn Gly Lys Lys Asn Lys Glu Asn Val Val Phe His Thr Leu 2850 2855 2860		
His Asn Met Ser His Lys Glu Met Ser Lys Tyr Asp Leu Ile Gly Lys 2865 2870 2875 2880		
Asn Lys Tyr Leu Glu Asn Tyr Ile Asn Asn Leu Ile Leu Glu Lys Lys 2885 2890 2895		
Lys Lys Ile Asn Asn Leu Asn Val His Ile Asn Lys Lys Met Asp Asn 2900 2905 2910		

Asn Ile Leu Tyr Ser Phe Ile Asn Arg Ile Asn Glu Thr Arg Asp Asn  
 2915 2920 2925  
 Thr Lys Lys Lys Asn Lys Leu Tyr Ile Arg Arg Tyr Tyr Leu Lys Lys  
 2930 2935 2940  
 Ser Ile Lys Tyr Asn Asn His Leu Tyr Asn Met Pro Ile Phe Leu Ser  
 2945 2950 2955 2960  
 Leu Phe Leu Arg Cys Val Thr Ile His Leu His Tyr Phe Lys Phe Tyr  
 2965 2970 2975  
 Asn Ser Tyr Ile Tyr Phe Leu Lys His Tyr Asn Met Leu His Ile Pro  
 2980 2985 2990  
 His Ala Val Leu Lys His Leu Tyr Ser Thr His His Phe Asn Ile Asn  
 2995 3000 3005  
 Leu Phe Val Asn Met Leu Glu Leu Phe Tyr Val Phe Ile Gln Ile Tyr  
 3010 3015 3020  
 Asn Asn Tyr Phe Val Ser Phe Cys Asp Ile Ser Ser Cys Arg Asn Lys  
 3025 3030 3035 3040  
 His Val Gln Arg Asp Gln Arg Cys Leu Asn Asn Asn Lys Asn Lys Ser  
 3045 3050 3055  
 Glu Asp Asn Glu Lys Ile Tyr Cys Thr Asn Asn Asn Gly Asp Gly Tyr  
 3060 3065 3070  
 Asp Asp Asp Gly Tyr Gly Glu Lys Asn Val Ser Gly Ile Tyr Lys Glu  
 3075 3080 3085  
 Asn Asn Asn Lys Ile Asn Val Lys Gly Asp Ile Tyr Asn Ile Asp Asn  
 3090 3095 3100  
 Ile Asn Val Tyr Pro Leu Asn Gly Lys Leu Val Ser Ile Tyr Leu Asn  
 3105 3110 3115 3120  
 Thr Leu Lys Glu Ile Leu Lys Glu Cys Tyr Glu Cys His Leu Gly His  
 3125 3130 3135  
 Met Lys Asn Asn Glu Asn Met Glu Lys Ser Phe Phe Ile Glu His Leu  
 3140 3145 3150  
 Leu Leu Tyr Phe Leu Tyr Asn Arg Ile Asn Thr Ile Tyr Glu Leu Phe  
 3155 3160 3165  
 Tyr Asn Phe Tyr Phe Thr Tyr Leu Arg Lys Lys Glu Asn Asn Asn Asp  
 3170 3175 3180  
 Ile Leu Leu Asp Ile Val Asn Glu His Ile Tyr Asn Leu Ile Gly Asn  
 3185 3190 3195 3200  
 Lys Ile Tyr Asp Gln Ile Asn Lys Ile Asn Asn Phe Leu Asp Asp Lys  
 3205 3210 3215  
 Gln Tyr Tyr Tyr Phe Tyr Ile Asn Thr Leu Thr Phe Ile Thr Leu Asn  
 3220 3225 3230  
 Lys Gln Ile Cys Ile Tyr Ile Ile Lys Lys Lys Ile Leu Asn Lys Leu  
 3235 3240 3245  
 Ile Tyr Ile Pro Phe Ile Tyr His Ser Leu Phe Asp Lys Asn Lys Asn  
 3250 3255 3260  
 Phe Thr Ser Ile Tyr His Ile Asn Asn Asn Gln Tyr Ile Arg Asn Lys  
 3265 3270 3275 3280

Asp His Ile Ile Phe Cys Ser Leu Ile Val Phe Ile Ile Lys Leu Leu  
 3285 3290 3295  
 Tyr Val Phe Val Lys Asn Phe Lys His Lys Asn Val Asn Phe Asn Asn  
 3300 3305 3310  
 His Gln Asn Asn Lys Asn His Glu Asn Val Asn Thr Asn Val Gly His  
 3315 3320 3325  
 Val Phe His Ser Ser Phe Ile Ser Glu Asn Pro Tyr Tyr His Val Thr  
 3330 3335 3340  
 Lys His Leu Asp Tyr Tyr Asn Asp His Thr Phe Met Glu Ser Met Lys  
 3345 3350 3355 3360  
 Val Ala Thr Asn Arg Ile Tyr Glu Asn Pro Tyr Tyr Arg Asn Tyr Asn  
 3365 3370 3375  
 Lys Glu Pro Tyr Thr Ser Asn Glu His Lys Ile Leu Asn Ser Asn Met  
 3380 3385 3390  
 Asp Ile Asn Asn Ser Asn His Phe Leu Arg Ser Asn Asp Glu Asn Val  
 3395 3400 3405  
 Lys Thr Asn Thr Asn Thr Asn Thr Asn Thr Asn Thr Asn Thr Asn Thr  
 3410 3415 3420  
 Asn Lys Asn Ser Asp Thr Asp Asn His Asn Asp Ala Tyr Asn His Asn  
 3425 3430 3435 3440  
 Asp Ala Tyr Asn His Asn Asp Ala Tyr Asn His Asn Asp Ala Tyr Asn  
 3445 3450 3455  
 His Asn Asp Ala Tyr Asn His Asn Asp Ala Tyr Asn His Asn Asp Ala  
 3460 3465 3470  
 Tyr Asn His Asn Asp Ala Tyr Asn His Asn Asp Ala Tyr Asn His Asn  
 3475 3480 3485  
 Asp Ala Asp Asn His Asn Asp Thr Asp Asn His Ser Asp Asn Tyr Asn  
 3490 3495 3500  
 Ser His Lys Tyr Lys Gly Thr Tyr Lys Ile Tyr Arg Ile His Asp Glu  
 3505 3510 3515 3520  
 Glu Asp Ile Ile Gln Asp Asn Asn Tyr Thr Asn Asp Asp Tyr Val Asn  
 3525 3530 3535  
 Thr Asn Tyr Asn Phe His Gln Asn Asn Asn Tyr Gln Asn Ser Ser Lys  
 3540 3545 3550  
 Asp Asn Ser His Thr Tyr Thr Ser Ser Gly Asp Asp Asn Leu Asn Asn  
 3555 3560 3565  
 Pro Phe Ile Ser Leu Asn Lys Glu Asn Ile Ser Lys Lys Lys Lys Asn  
 3570 3575 3580  
 Lys Lys Thr Asn Lys Asn Arg Glu Glu Glu Lys Lys Lys Lys Asn Glu  
 3585 3590 3595 3600  
 Ile Ile His Asn Glu Val Glu Tyr Phe Leu Glu Ala Ile Leu Asn Val  
 3605 3610 3615  
 Val Gly Lys Leu Ser Asp Arg Ile Asn Phe Ile Phe Leu Lys Ile Glu  
 3620 3625 3630  
 Lys Ile Asn Cys Leu Ala Ile Phe Glu Glu Ser Tyr Leu Tyr Val Glu  
 3635 3640 3645

3650                      3655                      3660  
 Phe Leu Ile Ser Leu Met Asp Lys Arg Val Glu His His Leu Phe Tyr  
 3665                      3670                      3675                      3680  
 Ile Asn Arg Ile Leu Glu Lys Phe Ile Tyr Glu Lys Glu Val Ile Ile  
                     3685                      3690                      3695  
 Tyr Pro Tyr Ser Pro Tyr Glu Ile Asn Ala Ser Thr Asn Val Pro Asn  
                     3700                      3705                      3710  
 Asn Gln Asp Lys Lys Lys Lys Lys Lys Ser Thr Lys Asn Glu Leu Thr  
                     3715                      3720                      3725  
 Leu Phe Thr Gln Arg Val Leu Tyr Ile Cys Tyr Lys Ser Ile Leu Asn  
                     3730                      3735                      3740  
 Tyr Asn Thr Ile Leu Leu Asn Leu Ile Gln Thr Pro Tyr Phe Lys Asn  
 3745                      3750                      3755                      3760  
 Ser His Phe Val Ile His Leu Tyr Ile Leu Ile Leu Lys Ser Thr Arg  
                     3765                      3770                      3775  
 Leu Val Thr Asn Ile Ile Glu His Phe Gly Lys Lys Asn Thr Thr Leu  
                     3780                      3785                      3790  
 Ile Arg Thr Val Ile Arg Ile Ile Arg Ile Val Leu Ser Asn Asp Asn  
                     3795                      3800                      3805  
 Asn Ser Tyr Val Pro Ile Cys Leu Asp Ile Leu Asn Thr Glu Lys Glu  
                     3810                      3815                      3820  
 Lys Lys Lys Glu Lys Ile His Tyr Thr Arg Gly Val Gly Lys Ser Asn  
 3825                      3830                      3835                      3840  
 Phe Thr Tyr Tyr Leu Ser Asp Ser Asn Thr Arg Ser Glu Glu Ser Ala  
                     3845                      3850                      3855  
 Tyr Pro Gly Glu Ile Ile Gln Tyr Asn Lys Ser Ile Asp Glu Tyr Ile  
                     3860                      3865                      3870  
 Asn Thr Lys Arg Val Tyr Lys Asn Asp His Leu Phe Asn Phe Leu Pro  
                     3875                      3880                      3885  
 Glu Ile Ile Ser Leu Lys Thr Tyr Tyr Asn Ile Leu Lys Glu Ile Leu  
                     3890                      3895                      3900  
 Glu Arg Ser Ala Phe Leu Gly Ala Phe Val Leu Asp Lys Leu Lys Asn  
 3905                      3910                      3915                      3920  
 Ser Asp Glu Asp Ser Cys Leu Lys Gln Ile Leu Val Ser Asn Ile Phe  
                     3925                      3930                      3935  
 Ser Tyr Leu Ile His Ile Asn Ala Thr Leu Leu Pro Ser Asn Ile Cys  
                     3940                      3945                      3950  
 Thr Asn Asn Leu Lys Lys Lys Cys Thr Leu Ile Tyr Asn Tyr Val Met  
                     3955                      3960                      3965  
 Asn Val His Lys Lys  
 3970

<210> 111  
 <211> 2206  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 111  
 Met Glu Tyr Leu Glu Ser Glu Lys Ser Ser Ser Asp Asp Arg Arg Glu  
 235

1	5	10	15
Val Asn Asn Phe Glu Asn Asp Tyr Ser Lys Asp Ser Ser His Ser Asn	20	25	30
Ile Asn Ser Asp Leu Asp Val Asp Arg Lys Lys His Ser Asp Asn Val	35	40	45
Tyr Glu Glu Ser Glu Gln Asp Gly Lys Gln Thr Glu Gly Arg Lys Lys	50	55	60
Ile Lys Gly Phe Phe Lys Leu Lys Lys Gly Asp Ser Glu Asp Glu Asn	65	70	75
Lys Glu Lys Glu Thr Lys Asp His Arg Leu Lys Asp Gly Gly Asp Thr	85	90	95
Phe Glu Glu Asn Ile Asn Val Leu Lys Lys Lys Lys Lys Lys Lys Asn	100	105	110
Ser Asp Thr Ile Asn Tyr Asn Lys Lys Tyr Phe Asn Lys Asn Lys His	115	120	125
Asn Gly Ser Ser Ser Asn Glu His Ser Ser Tyr Ser Asp Glu Asn Phe	130	135	140
Phe Glu Ala Ala Lys Arg Asn Lys Ile Leu Asn Glu Glu Ile Tyr Lys	145	150	155
Asn Lys Asp Asn Glu Asp Met Met Cys Asp Met Ser Ile Phe Asn Asp	165	170	175
Asp Asn Asn Met Asp Asp Ser Leu Phe Asn Lys Asn Glu Asp Asn Asn	180	185	190
Arg Tyr Asp Glu Glu Glu Met Lys Lys Tyr Lys Arg Lys Gly Lys Arg	195	200	205
Tyr Ser Ser Asp Ser Tyr Lys Asp Asp Ser Pro Gln Tyr Met Ser Glu	210	215	220
Arg Tyr Ser Ser Glu Lys Tyr Ser Ser Glu Lys Tyr Ser Ser Glu Lys	225	230	235
Tyr Ser Ser Glu Lys Tyr Ser Ser Ser Asn Arg Asn Gln Ser Thr Asn	245	250	255
Leu Leu Asn Asn Ile Lys Asn Phe Cys Asn Thr Tyr Ile Ile Asn Lys	260	265	270
Lys Lys Asp Arg Ser Arg Asp Thr Tyr Glu Asp Glu Glu Ser Arg Glu	275	280	285
Gly Ala Tyr Gly Glu Asn Thr Thr Glu Asp Leu Asn Glu Asp Thr Gln	290	295	300
Glu Gly His Lys Asn Lys Lys Lys Glu Ile Leu Met Asn Ile Leu Tyr	305	310	315
Asn Asp Ile Asn Ile Lys Lys Asn Asp Glu Lys Asp Phe Phe Met Asp	325	330	335
Arg Asn Phe Lys Gly Lys Lys Lys Glu Ile Asp Ile Lys Lys Asn Gln	340	345	350
Gln Val Met Lys Asn Met Leu Asn Ile Lys Asn Asn Glu Asn Ile Asp	355	360	365
Val Tyr Asn Asp Lys Asp Asn Phe Ile Asn Ile Asp Asp Lys Cys Pro	370	375	380



Ser Gly Tyr Phe Lys Asp Lys Ile Lys Glu Tyr Asp Tyr Leu Asp Asn  
 385 390 395 400  
 Glu Lys Gln Lys Asn Val Asn Lys Met Ile His Pro Lys Asp Gly Asn  
 405 410 415  
 Asn Asn Asn Asn Asn Asn Ile Leu Leu Ser Gln Asn Ser Ser Thr Ile  
 420 425 430  
 Leu Ser His Val Val Gln Glu Asp Tyr Ala Asp Gly Ile Lys Lys Phe  
 435 440 445  
 Asn Lys Asn Ser Phe Tyr Asn Asn Leu Glu Asn Arg Lys Leu Ile Asn  
 450 455 460  
 Ile Asn Asn Ile Tyr Asp Lys Tyr Lys Ile Ile Leu Ser Glu Ile Lys  
 465 470 475 480  
 Ser Gly Asp His Leu Asn Asn Val Glu Lys Lys Leu Asn Val Ile Glu  
 485 490 495  
 Asn Ser Leu Leu Cys Ile Phe Asp Leu Gln Asp Gly Asp Asn Asn Asn  
 500 505 510  
 Asn Ile Asn Asp Asp Asp Asp Asn Asp Asp Asp Gly His His Asp Asp  
 515 520 525  
 Gly His His Asp His Val Gly Asn Asn Met Lys Gly Asp Lys Leu Asp  
 530 535 540  
 Ile Lys Lys Arg Phe Ser Glu Leu Phe Asp Asp Ala Leu Asn Thr Leu  
 545 550 555 560  
 Ile Glu Asn Tyr Glu Asp Val Lys Lys Lys Glu His Ser Glu Asn Ile  
 565 570 575  
 Asn Lys Lys Ala Gln Leu Asn Leu Ser Cys Asp Phe Asn Leu Tyr Leu  
 580 585 590  
 Arg Ile Cys Lys Val Val Leu Asn Asp Glu Lys His Ile His Thr Ser  
 595 600 605  
 Asn Lys Lys Asn Met Leu Tyr Tyr Asn Asn Ile Tyr Lys Ile Asn Tyr  
 610 615 620  
 Ile Lys Ser Asn Asn Lys Asn Lys Asp Ile Leu Tyr Asn Ile His Cys  
 625 630 635 640  
 Arg Asn Ile His Leu Tyr Leu Ile Leu Ser Ser His Glu Gly Ile Glu  
 645 650 655  
 Arg Lys Lys Gln Gln Met His Ile Leu Lys Asp Lys Asp Lys Asp Lys  
 660 665 670  
 Asn Lys Asn Lys Asp Lys Asn Lys Asn Lys Glu Asn Ile Leu Asn Glu  
 675 680 685  
 Asn Ile Arg Lys Ile Gln Lys Gln Asn Lys Lys Gln Asn Gln Asn Phe  
 690 695 700  
 Ile Asp Ile Asp Asn Ile Tyr Tyr Thr Asn Lys Leu Arg Asn Ile Asn  
 705 710 715 720  
 Asn Val Asn Asp Met Asn Asp Met Tyr His Ile His Asn Asp Glu Asn  
 725 730 735  
 Asp Val Ile Asn Gln Lys Leu Tyr Tyr Asp Glu Ile Asp Tyr Thr Lys  
 740 745 750

Lys Gly Ile Leu Asp Lys Ile His Val Leu Trp Phe Tyr Glu Lys Lys  
 755 760 765  
 Asn Glu Val His Tyr Leu His Leu Tyr Asn Leu Asn Asn Ile Asn Ser  
 770 775 780  
 Lys Met Leu Ser Ile Ile Ile Asp Gly Tyr Leu Glu Cys Ile Asp Val  
 785 790 795 800  
 Val Tyr Leu Asn Asn Phe Phe Pro Leu Glu Ser Phe Tyr Asn Ser Val  
 805 810 815  
 Lys Asn Tyr Tyr Leu Met Leu Ile Thr Glu Asn Ser Phe Tyr Phe Phe  
 820 825 830  
 Asn Ile His Leu Tyr Phe Asn Cys Glu Glu Asp Tyr Asn Ile Ser Glu  
 835 840 845  
 Asn Glu Lys Leu Ile Tyr Gln Asn Ile Tyr Pro Phe Tyr Phe Asn Ile  
 850 855 860  
 Tyr Leu Phe Leu Leu Phe Lys Val Pro Lys Asp Ser Lys Met Lys Phe  
 865 870 875 880  
 Glu Tyr Ile Arg Ser His Glu Lys Ser Glu Arg Ile Phe Leu Val Val  
 885 890 895  
 Asn Asp Gly Asn Val Tyr Glu Phe Ile Tyr Glu Lys Lys Asn Leu Phe  
 900 905 910  
 Glu Pro Phe Asn Ile Phe Lys Asn Ile Ile Val Asn Ser Ile Ser Ser  
 915 920 925  
 Leu Ile Asn Val Val Asn Glu Lys Ile Phe His His Ser Arg Asn Tyr  
 930 935 940  
 Met Ile Glu His Thr Ala Asn Asp Asp Asn Ser Ser Phe Asn Tyr Tyr  
 945 950 955 960  
 Asp Asn Gly Lys Ser Ser Ile Asn Ser Tyr Asn Ile Ser Asn Thr Tyr  
 965 970 975  
 Pro Glu Tyr Met Asp Asn Lys Ser Phe Ile Asp Glu Tyr Asn Lys Asn  
 980 985 990  
 Ile Tyr Cys Asp Asp Leu His Asp Tyr Pro Ile Lys Phe Tyr Leu Lys  
 995 1000 1005  
 Lys Ile Ile Ser Thr Tyr Phe Ile Lys Tyr Phe Ala Phe Phe Lys Asn  
 1010 1015 1020  
 Lys Val Lys Lys Ile Ile Ile Asp Asn Glu Arg Ser Ile Leu Tyr Val  
 1025 1030 1035 1040  
 Leu Tyr Glu Asn Ser Asp Leu Tyr Val Lys Leu Leu Ser Asn Arg Ala  
 1045 1050 1055  
 Asp Val Asn Asn Lys Lys Lys Asn Tyr Leu Ser Asp Thr Ile Ile Phe  
 1060 1065 1070  
 Thr Lys Gly Glu Leu Ile Lys Glu Leu Asn Asn Ile Tyr Phe Ile Asp  
 1075 1080 1085  
 Asp Met Asn Ile Leu Tyr Asn Asp Met Tyr Asn Met Asn Asn Ile Asn  
 1090 1095 1100  
 Asn Met Val Asn Met Asn Asn Ile Asn Asn Met Val Asn Met Asn Asn  
 1105 1110 1115 1120  
 Met Asn Asn Met Asn Asn Met Val Asn Met His Asn Met Val Asn Met

1125										1130										1135									
His	Asn	Met	Val	Asn	Met	His	Asn	Met	His	Asn	Met	His	Asn	Met	His	Asn	Met	His	Asn	Met	His	Asn	Met	His	Asn	Met	His		
1140										1145										1150									
Asn	Ile	Pro	Asn	Met	His	Asn	Met	Asn	Ser	Asn	Thr	Asn	Asn	Lys	Phe														
1155										1160										1165									
Gly	Phe	Ala	His	Asn	Asn	Ile	Asp	Pro	Thr	Thr	Phe	His	Lys	Leu	Asn														
1170										1175										1180									
Ile	Ile	Asp	Ile	His	Ile	Asn	His	Ile	His	Glu	Arg	Asn	Asn	Ile	Phe														
1185										1190										1195									
Leu	Lys	Met	Val	Asp	Asn	Asn	Phe	Asn	Ile	Tyr	Tyr	Leu	Ser	Leu	Val														
1205										1210										1215									
Lys	Asn	Met	Asp	Thr	Asn	Asn	Tyr	Lys	Leu	Ile	Leu	Lys	Asp	Phe	Gln														
1220										1225										1230									
Asn	Tyr	Pro	His	Lys	Lys	Gly	Leu	Lys	Ile	Asn	Asp	Lys	Asn	Ser	Asp														
1235										1240										1245									
Val	Ile	Phe	Thr	His	His	Leu	Lys	Asn	Leu	Tyr	Ile	Ile	Leu	Lys	Lys														
1250										1255										1260									
Lys	Asn	Leu	Lys	Lys	Lys	Glu	Pro	Asn	Lys	Ala	Val	Val	His	Lys	Asp														
1265										1270										1275									
Asp	Ala	Gln	Ala	Lys	Lys	Lys	Thr	Phe	Phe	Phe	Phe	Asn	Lys	Asp	Lys														
1285										1290										1295									
Met	Asp	Ser	Gln	Lys	Ile	Arg	Lys	Thr	His	Ala	His	Lys	Arg	Arg	Ser														
1300										1305										1310									
Thr	Ile	Leu	Arg	Arg	Asp	Thr	Ser	Arg	Arg	Val	Asp	Lys	Asn	Thr	Gln														
1315										1320										1325									
Gly	Lys	Ala	Thr	Tyr	Lys	Met	Met	Ser	Lys	Gln	Lys	Arg	Gly	Lys	Ile														
1330										1335										1340									
Arg	Lys	Arg	Gly	Glu	Glu	Val	Gly	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Glu														
1345										1350										1355									
Glu	Glu	Glu	Asp	Glu	Glu	Asp	Glu	Tyr	Glu	Glu	Glu	Asp	Glu	Tyr	Glu														
1365										1370										1375									
Gln	Glu	Asp	Glu	Tyr	Asp	Glu	Glu	Asp	Glu	Tyr	Asp	Glu	Glu	Asp	Glu														
1380										1385										1390									
Tyr	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gly	Arg	Arg	Arg	Lys	Lys	Ser														
1395										1400										1405									
Tyr	Arg	Ile	Lys	Lys	His	Ser	Ser	Asn	Lys	Asn	Leu	Asn	Asp	Asp	Glu														
1410										1415										1420									
Glu	Lys	Asn	Thr	Tyr	Gln	Glu	Glu	Asp	Gln	Asp	Ser	Tyr	Asp	Asp	Ile														
1425										1430										1435									
Ser	Asp	Asn	Ala	Asn	Asp	Tyr	Asn	Asn	Asn	Tyr	Asn	Asn	Asn	Tyr	Asn														
1445										1450										1455									
Asn	Asn	Tyr	Asn	Asn	Asn	Tyr	Asn	Asn	Asn	Tyr	Asp	Asn	Asn	Tyr	Asp														
1460										1465										1470									
Asn	Phe	Asn	Phe	Glu	Gln	Asp	Asn	Glu	Ser	Glu	Glu	Glu	Lys	Val	Cys														
1475										1480										1485									
Tyr	Lys	Leu	Lys	Leu	Leu	Thr	Cys	Ala	Asp	Asp	Ile	Gly	Asn	Thr	Asn														
1490										1495										1500									

Gln Met Ser Ser Ser Asn Lys Asn Lys Phe Ile Phe Lys Gln Ile Asn  
 1505 1510 1515 1520  
 Glu Tyr Tyr Ile Asn Glu Glu Ile Ile Gly Val Ile Tyr Lys Lys Lys  
 1525 1530 1535  
 Asn Tyr Tyr Phe His Glu Phe Phe Glu His Thr Glu Asn Asp Asn Ile  
 1540 1545 1550  
 Leu Lys Asp Phe Tyr Val Asn Lys Met Lys Gln Asp Asn Ile Ser Asn  
 1555 1560 1565  
 Ile Met Ala Arg Asn Glu Lys Asn Arg Phe His Leu Asn Ser Gln Val  
 1570 1575 1580  
 Arg Ser Glu Pro Asn Leu Arg Thr Thr Leu Gly Asn Asn Leu Thr Asn  
 1585 1590 1595 1600  
 Thr Asn Met Met Pro Asn Asn Met Ser Thr Met Ser Ile Pro Asn Met  
 1605 1610 1615  
 Asn Val Asn His Met Asn Val Asn His Met Asn Val Asn Asn Met Asn  
 1620 1625 1630  
 Ile Asn Asn Met Asn Ile Asn Asn Met Asn Val Pro Asn Arg Asn Met  
 1635 1640 1645  
 Pro Asn Arg Asn Ile Pro Asn Met Met His Val Asp Ser Gln Asn Asn  
 1650 1655 1660  
 Leu Tyr Asn Ser Gly Tyr Asn Ser Lys Pro Ser Gly Asn Leu Tyr Asp  
 1665 1670 1675 1680  
 Glu Arg Asn Phe Met Asn Met Gly Glu Val Arg Asp Lys Met Glu Ser  
 1685 1690 1695  
 Ile Pro Pro Phe Tyr Leu Tyr Glu Asn Thr Val Ser Glu Tyr Gln Glu  
 1700 1705 1710  
 Tyr Tyr Asp Leu Met Ile Ile Thr Lys Lys His Ile Tyr Tyr Ile Ser  
 1715 1720 1725  
 Lys Asn Thr Arg Thr Gln Lys Ile Glu Lys Met Ile Asn Asn Tyr Leu  
 1730 1735 1740  
 Pro Tyr Lys Ile Ser Tyr Glu Asn Arg Asn Ile Glu Ser Val Val Leu  
 1745 1750 1755 1760  
 Lys Glu Ile Lys Ile Lys Glu Tyr Gly Lys Lys Asn Gln Glu Asp Phe  
 1765 1770 1775  
 Tyr Lys Ser Ile Lys Gln Asn Met Leu Met Lys Ile Asn Asn Asp Lys  
 1780 1785 1790  
 Asn Asn Ile Ile Ser Lys Gln Leu Ile Asn Ser Val Ser Gly Gly Ile  
 1795 1800 1805  
 Pro Ile Asp Ile Pro Pro Ser Pro Thr Ser Leu Ile Lys Glu Lys Asn  
 1810 1815 1820  
 Glu Tyr Glu Glu Ile Tyr Glu Tyr Phe Ile Asn Gln Ile Ile Glu Ile  
 1825 1830 1835 1840  
 Ser Ser Thr Glu Glu Phe Leu Phe Ile Ile Trp Ser Ile Leu Leu Asn  
 1845 1850 1855  
 His Val Tyr Lys Tyr Glu Ile Met Cys Phe Ser Asn Ile Gln Ser Ser  
 1860 1865 1870

Asn Gln Arg Asp Ile Lys Asn Lys Leu Asn Asp Asp Lys Ser Lys Arg  
 1875 1880 1885  
 Asn Met Asp Ala Ile His Asn Met Asp Asn Thr Asn Tyr Tyr Asn Ser  
 1890 1895 1900  
 Tyr Gly Ile Pro Arg Met Ser Met Asn Ile Ala Gly Ser Ser Thr Gly  
 1905 1910 1915 1920  
 Gln Asp Arg Lys Lys Leu Phe Leu Gln Asn Phe Lys Lys Asn Asp Met  
 1925 1930 1935  
 Asn Asn Asn Asn Asn Asn Asn Asn Asn Asp Asp Asp Glu Leu Leu Ser  
 1940 1945 1950  
 Gln Asn Glu Asp Glu Gln Asn Met Phe Glu Asn Ser Tyr Ile Lys Lys  
 1955 1960 1965  
 Asp Trp Asn Asn Tyr Asn Asn Asn Asn Asn Asn Val Asp Tyr Asp Val  
 1970 1975 1980  
 Leu Asn Lys Ile Tyr Lys Arg Thr Pro Phe Lys Phe Gly Phe Val Asp  
 1985 1990 1995 2000  
 Lys Ser Ala Asp Tyr Ile Ile Lys Gln Gly Lys Leu Gln Lys Ala Met  
 2005 2010 2015  
 Glu Leu Glu Ile Lys Thr Arg Lys Val Lys Gly Ile Asn His Leu Phe  
 2020 2025 2030  
 Asn Asp Asn Ile Ile Asp Asp Leu Glu Asn Glu Leu Thr Lys Ser Gly  
 2035 2040 2045  
 Gly Asn Asn Lys Asn Gly Asp Tyr Lys Asn Lys Asn Asp Asn Val Leu  
 2050 2055 2060  
 Asp Asn Glu Asn Ile Leu Leu Asn Asp Ala Ala Tyr Ser Asn Leu Tyr  
 2065 2070 2075 2080  
 Asn Ala Tyr Gln Lys Asn Ser Ser Lys Gln Lys Leu Leu Glu Ala Glu  
 2085 2090 2095  
 Arg Asn Lys Ser Gly Thr Phe Ala Phe Glu Tyr Leu Thr Asn Lys Asn  
 2100 2105 2110  
 Phe Asp Ile Val Phe Leu Lys Asn Leu Lys Cys Tyr Asn Asn Ser Leu  
 2115 2120 2125  
 His Met Leu Ser Arg Gly Leu Leu Leu Leu Leu Ser Arg Leu Leu Lys  
 2130 2135 2140  
 Pro Val Met Phe Ile Asn Leu Phe Ser Tyr Glu Lys Tyr Arg Asp Val  
 2145 2150 2155 2160  
 Asn Val Phe Lys Cys Ser Ser Asn Val Pro Tyr Lys Ser Arg Lys Tyr  
 2165 2170 2175  
 Met Lys Val Ser Glu Ala Ser Arg Gly Lys Lys Glu Lys Lys Lys Lys  
 2180 2185 2190  
 Lys Lys Tyr Ile Tyr Ile Tyr Ile Tyr Ile Tyr Val  
 2195 2200 2205

&lt;210&gt; 112

&lt;211&gt; 1817

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 112

Met	Tyr	Asn	Phe	Leu	Val	Cys	Phe	Phe	His	Ala	Gly	Val	Gly	Ile	Ser	1	5	10	15
Ile	Ile	Ser	Lys	Glu	Lys	Ile	Glu	Glu	Asp	Glu	Glu	Glu	Ser	Phe	Tyr	20	25	30	
Asn	Met	Lys	Asp	Phe	Cys	Ile	Ile	Arg	Met	Ser	Asp	Tyr	Met	Tyr	Ser	35	40	45	
Arg	Arg	Lys	Arg	Lys	Arg	Asn	Ile	Leu	Glu	Asp	Asp	Ser	Asn	Met	Leu	50	55	60	
Ile	Leu	Thr	Gly	Asn	Leu	Pro	Leu	Asp	Phe	Cys	Leu	Asn	Leu	Val	Glu	65	70	75	80
Lys	Leu	Lys	Cys	Leu	Ser	Leu	Cys	Val	Ser	Ile	Val	Leu	Arg	Ser	Leu	85	90	95	
Ile	Lys	Lys	Lys	Asn	Glu	Tyr	Thr	Thr	Lys	Ile	Lys	Asn	Ile	Lys	Asp	100	105	110	
Val	Ser	Ile	Ile	Asn	Leu	Tyr	Tyr	Asp	Tyr	Thr	Leu	Ile	Met	Ile	Asn	115	120	125	
Glu	Ile	Asn	Glu	Phe	Tyr	Ser	Ile	Leu	Asn	Phe	Ile	Asn	Phe	Ser	Ile	130	135	140	
Glu	Tyr	Met	Leu	Ile	Tyr	Cys	Ile	Ile	Ile	Cys	Asp	Tyr	Tyr	Lys	Asn	145	150	155	160
Lys	Ser	Ile	Ile	Lys	Lys	Lys	Asn	Ile	Gly	Asn	Lys	Lys	Asn	Phe	Ile	165	170	175	
Tyr	Leu	Ser	Ser	Thr	Leu	Phe	Asp	Leu	Leu	Ile	Lys	Cys	Asn	Phe	Met	180	185	190	
Arg	Thr	Tyr	Leu	Ser	Ser	Thr	Tyr	Arg	Asn	Ile	Leu	Lys	Gln	Cys	Leu	195	200	205	
Phe	Asn	Ile	Ile	Arg	Ser	Gly	Lys	Tyr	Ile	Pro	Ile	Glu	Phe	Phe	Gln	210	215	220	
Gly	Tyr	Ile	Ile	His	Lys	Asn	Glu	Phe	Leu	Ala	Leu	Phe	Leu	Thr	Lys	225	230	235	240
Arg	Ile	Glu	Glu	Glu	Val	Phe	Leu	Lys	Lys	Lys	Met	Lys	Val	Lys	Glu	245	250	255	
Tyr	Tyr	Asp	Tyr	Asn	Asn	Asn	Lys	Ser	Lys	Thr	Asp	Asn	Asn	Leu	Leu	260	265	270	
Thr	His	His	His	Lys	Tyr	Gly	Asp	Phe	Met	Ala	Ser	Ser	Glu	Lys	Arg	275	280	285	
Ala	Glu	His	Phe	Ile	Asn	Glu	Asn	Leu	Lys	Asn	Ala	Met	Ile	Ser	Ile	290	295	300	
Asn	Ile	Tyr	Lys	Leu	Ile	Ile	Leu	Leu	Tyr	Lys	Ala	Asp	Tyr	Tyr	Arg	305	310	315	320
Cys	Thr	Ser	Thr	Leu	Ile	Cys	Leu	Phe	Ile	Asp	Ser	Phe	Tyr	Lys	Thr	325	330	335	
Leu	Gly	Gly	Asp	Lys	His	Lys	Asn	Leu	Ile	Leu	Lys	Asp	Glu	Val	Ile	340	345	350	
Thr	Asp	Thr	Lys	Gln	Gly	Lys	His	Asp	Met	Asn	Asp	Tyr	Asn	Met	Asn	355	360	365	
Lys	Lys	Asn	Asn	Met	Asp	Ile	Asn	Ile	Thr	Ile	Asn	Asn	Asn	Asn	Asn				

370					380					390					
Asn	Asn	Asn	Asn	Lys	Ile	Tyr	Asn	Asp	Asn	Thr	Leu	Asn	Val	Tyr	Asn
385					390					395					400
Asn	Ser	Tyr	Asn	Ile	His	Ser	Asn	His	Leu	Met	Asn	Asp	Lys	Arg	Lys
				405					410					415	
Asn	Ala	Gln	Val	Leu	Glu	Lys	His	Leu	Lys	Met	Leu	Cys	Asp	Asn	Phe
			420					425					430		
Phe	Asn	Leu	Glu	Glu	Phe	Tyr	Ser	Ser	Asn	Ile	Ile	Ile	Asn	Asn	Met
		435					440					445			
Asp	Ile	Glu	Tyr	Thr	Tyr	Asp	Tyr	Phe	Ile	Leu	Tyr	Glu	Lys	Cys	Phe
	450					455					460				
Leu	Pro	Ile	Glu	Arg	Ile	Val	His	Val	Asn	Tyr	Met	Lys	Tyr	Leu	Tyr
465					470					475					480
Lys	Asn	Asn	Glu	Arg	Lys	Lys	Asn	Lys	Ile	Arg	Lys	Phe	Leu	Ile	Thr
				485					490					495	
Leu	Leu	Glu	Tyr	Ser	Arg	Asp	Ile	Asn	Phe	His	Phe	Phe	Ile	Phe	Asn
			500					505					510		
Leu	Ile	Leu	Tyr	Lys	Cys	Lys	Asn	Glu	Phe	Pro	Cys	Ser	Ile	Phe	Glu
		515					520					525			
Leu	His	Ile	Ser	Gln	Tyr	Leu	Tyr	Phe	Phe	Val	Lys	Leu	Asn	Glu	Leu
	530					535					540				
Asn	Ile	Lys	Asp	Ala	Tyr	Ile	Tyr	Tyr	Phe	Asn	Asn	Phe	Lys	Tyr	Gln
545					550					555					560
Asp	Met	Ile	Ile	Tyr	Phe	Ser	Arg	Lys	Ala	Phe	Tyr	Pro	Trp	Glu	Thr
				565					570					575	
Asn	Val	Glu	Gln	Gln	Lys	Lys	Gln	Thr	Leu	Ser	Tyr	Ile	Tyr	Asn	Asp
			580					585					590		
Lys	Ile	Lys	Lys	Asn	Lys	Lys	Asn	Asn	Ser	Tyr	Tyr	Glu	Met	Asn	Asn
		595					600					605			
Asn	Thr	Tyr	Met	Asn	Glu	His	Gly	Tyr	Thr	Asp	Ile	Glu	Asn	Glu	Arg
	610					615					620				
Leu	Asn	Lys	Lys	Asn	Lys	Arg	Leu	Asn	Val	Arg	Gly	Arg	Thr	Asn	Thr
625					630					635					640
Leu	Asp	Asp	Ile	Ile	Val	Ser	Asp	His	Gly	Asn	Ser	Tyr	Asp	Lys	Tyr
				645					650					655	
Asn	Thr	Ser	Lys	His	Asn	Arg	Arg	Lys	Asn	His	Ile	Asn	Glu	Met	Lys
			660					665					670		
Lys	Lys	Gln	Asn	Asn	Lys	Lys	Lys	Asn	Thr	Leu	Phe	Val	Asp	Gly	Lys
			675				680					685			
Asp	Met	Glu	Gly	Ile	Gly	Lys	Glu	Lys	Glu	Lys	Glu	Asn	Lys	Asn	Met
	690					695					700				
Asn	Asn	Asn	Ile	Phe	Tyr	Asn	Asn	Ser	Tyr	Ser	Asn	Ile	Asn	Asn	Ser
705					710					715					720
Ser	Tyr	Ser	Asn	Ile	Asn	Asn	Asp	Ile	Tyr	Ser	Val	Asp	Asn	Met	Thr
				725				730					735		
Ser	Val	Asn	Asn	Thr	Lys	Tyr	Val	Ser	Gly	Val	Pro	Ser	Tyr	Ala	His
			740					745					750		

Val Leu Ile Asn Lys Gln Val Asn Glu Tyr Tyr Gln Gly Leu Pro Asn  
 755 760 765  
 Tyr Asn Asn Met Met Ile Lys Gly Ser His Ile Ile Asn Glu Leu Pro  
 770 775 780  
 Lys Asn Asn Tyr Ile Tyr Glu Asn Asn Tyr Ile Gly Gln Asn Tyr Leu  
 785 790 795 800  
 Met Thr Asn Pro Leu Tyr Asn Lys Glu Thr Lys Asp Ile Phe Tyr Thr  
 805 810 815  
 Ile Tyr Lys Tyr Leu Phe Lys Ile Ile Ser Tyr Pro Ser Leu Lys Lys  
 820 825 830  
 Arg Met Glu Phe Ile Asp Asn Cys Met Lys Thr Lys Ile Phe Val Ile  
 835 840 845  
 Arg Lys Val Cys Asn Phe Lys Asn Arg Pro Phe Ser Ser Asn Lys Lys  
 850 855 860  
 Asn Asn Lys Met Asn Arg Asp Ser Ser Tyr Val Asp Asn Ile Ser Ser  
 865 870 875 880  
 Tyr Tyr Asp Asp Asp Asn Asn Asn Asn Asn Asn Asn Ile Asn Ile Leu  
 885 890 895  
 Lys Lys Lys Lys Lys Lys Arg Glu Val Gly Leu Gly Gly Ile Arg Leu  
 900 905 910  
 Arg Asn Gly Val Asp Asn Lys Arg Thr His Asp Asp Thr Ile Asp Glu  
 915 920 925  
 Lys Tyr Lys Asn Asn Arg Asn Tyr Leu Phe Met Asn Gly Val Asp Val  
 930 935 940  
 Leu Tyr Asn Lys Asp Gln Leu Gly Tyr Tyr Lys Asn Ser Leu Asp Asp  
 945 950 955 960  
 Asn Asn Asn Asn Asn Asn Asn Tyr Asn Asn Asp Asn Ile Arg Arg Ser  
 965 970 975  
 His Val Ser Ser Cys Ser Tyr Arg Arg Ala His Asn Asn Ile Lys Tyr  
 980 985 990  
 Asp Ile Lys Glu Gly Gly Ser Asp Asn Ile Tyr Thr Ser Asn Ile Lys  
 995 1000 1005  
 Arg Asn Lys Lys Lys Ile Lys Asn Ile Glu Glu Ile Phe Asn Ile Asn  
 1010 1015 1020  
 Ser Met Leu Asn Lys Glu Ala Leu Lys Asn Tyr Tyr Thr Val Asp Lys  
 1025 1030 1035 1040  
 Thr Ile Leu Tyr Asp Glu Ser Phe Ser Lys Leu Leu Lys Gly Ile Phe  
 1045 1050 1055  
 Glu Lys Asn Lys Cys Leu Phe Lys Leu Lys Glu Asn Tyr Trp Ser Lys  
 1060 1065 1070  
 Gln Asn Ser Tyr Tyr Leu His Leu Lys Asp Ile Lys Lys Cys Arg Thr  
 1075 1080 1085  
 Cys Leu Asn Tyr Gln Arg Leu Leu Phe His Glu Val Ile Asn Leu Phe  
 1090 1095 1100  
 Val Phe Tyr Val Tyr Lys Phe Cys Asn Trp Asp Val Leu Lys Asn Tyr  
 1105 1110 1115 1120



Phe Asp Ile Leu Ile Asn Gly Ser Glu Glu Ala Ile Ile Lys Val Leu  
 1125 1130 1135  
 Glu His Phe Arg Asn Ile Asn Lys Glu Gln Ile Asp Val Ile Arg Lys  
 1140 1145 1150  
 Ser Tyr Asn Asn Met Tyr Glu Tyr Leu Ser Lys Ser Lys Tyr Glu His  
 1155 1160 1165  
 Ile Asp Asp Ile Ile Asn Asp Tyr Asn Asn Lys Ile Asn Asn Met Glu  
 1170 1175 1180  
 Arg Lys Ile Asn Ile Asn Arg Ile Ile Asp Ile Ile Asp Ile Phe Lys  
 1185 1190 1195 1200  
 Glu Tyr Leu Leu Leu Ile Gln Gln Glu Ile His Thr Lys Glu Gly Leu  
 1205 1210 1215  
 Lys Asn His Ile Tyr Gly Lys Ser Lys Ile Leu Phe Lys Asn Phe Leu  
 1220 1225 1230  
 Pro Ser Phe Asn Leu Leu Lys Leu Ile Ile Leu Cys Asp Lys Lys Lys  
 1235 1240 1245  
 Glu Lys Ile Glu Asn Leu Asn Thr Asn Cys Phe Ser Thr Val Asn Asn  
 1250 1255 1260  
 Met Leu Arg Asn Asp Met Ile Lys Gly Ser Thr Phe Tyr Phe Ser Lys  
 1265 1270 1275 1280  
 Tyr Ser Tyr Cys Phe Glu Arg Leu Leu Asp Tyr Ala Phe Ser Leu Thr  
 1285 1290 1295  
 Ile Thr Phe Glu Asn Ile Asn Phe Ile Ile Asn Tyr Ile Gly Asp Val  
 1300 1305 1310  
 Leu Lys Leu Tyr Glu Val Asp Phe Lys Asn Ser Leu Tyr Leu Leu Val  
 1315 1320 1325  
 Ile Ile Lys Leu His Lys Phe Ile Asn Asn Leu Phe Glu Ile Thr Lys  
 1330 1335 1340  
 Val Arg Glu Ile Leu Lys Thr Lys Val Ser Ile Leu Lys Asn Asn Lys  
 1345 1350 1355 1360  
 Tyr Tyr Glu Arg Ile Lys Leu Leu Tyr Leu Leu Asn Cys Ile Pro Leu  
 1365 1370 1375  
 Ile Tyr Leu Asp Pro His Met Asn Val Ile Leu Ile Asn Glu Ser Tyr  
 1380 1385 1390  
 Glu Tyr Lys Met Asn Asp Asp Asp Lys Ile Ile Phe Ser Lys Leu Ser  
 1395 1400 1405  
 Pro Phe Ser Leu Val Ser Lys Val Val Asn His Lys Leu Arg Ser Val  
 1410 1415 1420  
 Tyr Thr Tyr His Asp Tyr Thr Asp Asn Leu Glu Asn Glu Glu Pro Ile  
 1425 1430 1435 1440  
 His Lys Asn Lys Thr Ser Lys Ser Met Asn Asp Asp Thr Lys Ser Val  
 1445 1450 1455  
 Ser His Tyr Glu Glu Thr Lys Lys Lys Asn Asp Asp Asp Asp Met Ser  
 1460 1465 1470  
 Tyr Asp Ser Ser Ser Asp Tyr Pro Lys Asp Ile Ser Tyr Asp Thr Ser  
 1475 1480 1485  
 Asp Gly Ser Tyr Arg Asp Asn Asn Asn Asn Gly Ser Gly Pro Asn Asp

1490	1495	1500
Val Lys Gln Met Lys Glu Lys Gly Ile Pro Lys Val Ser Lys Glu Asn 1505 1510 1515 1520		
Ala Lys Asn Lys Lys Lys Asn Val Asn Val Asn Ile Asn Ile Asn Asn 1525 1530 1535		
Lys Asn Asp Glu Ser Tyr Asn Ile His Asn Lys Ile Lys Lys Asp Asn 1540 1545 1550		
Ile Ile Ala Ile Asp Lys Asp Asp Arg Lys Thr Leu Tyr Tyr Leu Tyr 1555 1560 1565		
Asn Val Asn Tyr Cys Phe Asn Asp Gln Asn Asn Asn Asn Asn Asn Asn 1570 1575 1580		
Asn Asn Asn Met Asn Asn Ser Asn Ile Phe Gly Asn Pro His Asn Pro 1585 1590 1595 1600		
Glu Leu Val Val Leu Ser Tyr Lys Asn Tyr Cys Phe Tyr Ile Val Trp 1605 1610 1615		
Ile Ser Asn Leu Leu Leu Asn His Lys Ile Glu Tyr Glu Ser Leu Ile 1620 1625 1630		
Tyr Val Tyr Leu Lys Ile Tyr Asn Asn Thr Lys His Gln Lys Ala Ser 1635 1640 1645		
Leu Leu Glu Glu His Glu Ile Thr Ile Ile Leu Tyr Tyr Leu Phe Thr 1650 1655 1660		
Met Trp Ile Asn Gly Asp Lys Asn Asn Ser Ser Phe Phe Phe Tyr Asn 1665 1670 1675 1680		
Glu Glu Lys Ser Tyr His Glu Lys Asn Asn Leu Gly Tyr Phe Leu Lys 1685 1690 1695		
Asp Thr Tyr Gly Asn Leu Gln Tyr Ile Asn Asn Tyr Ser Leu Ile Thr 1700 1705 1710		
Leu Leu Lys Glu Leu Leu Ser Arg Ala Glu Phe Tyr Phe Glu Tyr Thr 1715 1720 1725		
Ser Asp Ala Ala Ser Arg Asn Tyr Asp Ile Ser Cys Ile Ile Leu Asp 1730 1735 1740		
Ser Ser Ile Tyr Asp Asn Glu Lys Val Lys Lys Ser Ser Val Asp Ile 1745 1750 1755 1760		
Leu Lys Lys Phe Phe Asp Asn Ile Tyr Ile Thr Phe Asn Asp Val Leu 1765 1770 1775		
Ile Lys Ile Pro Phe Leu Asn Gln Ile Leu Glu Phe Gln Lys Ile His 1780 1785 1790		
Glu Phe Leu Lys Arg Phe Lys Ile Tyr Leu Asp Glu Ile Ile Cys Arg 1795 1800 1805		
Ile Thr Leu Thr Glu Gly Asn Tyr Ile 1810 1815		

&lt;210&gt; 113

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 113

Met Lys Lys Ser Arg Phe Leu Leu Leu Ser Ile Phe Phe Cys Phe Val

246

```
<210> 114
<211> 447
<212> PRT
<213> Plasmodium falciparum
```

<400>	114																
Met	Asp	Glu	Trp	Ile	Val	Val	Gln	Lys	Lys	Lys	Ser	Asp	Leu	His	Lys		
1				5					10					15			
Lys	Gln	Val	Ile	Asp	Lys	Leu	Thr	Val	Glu	Asn	Glu	Lys	Lys	Gln	Arg		
			20					25					30				
Glu	Lys	Lys	Asn	Glu	Asn	Ala	Glu	Asn	Asn	Ile	Tyr	Glu	Glu	Lys	Glu		
		35					40					45					
Asn	Asn	Lys	Ile	Gln	Ser	Ile	Tyr	Asn	Lys	Lys	Lys	Lys	Met	Asn	Val		
		50				55					60						
Lys	Asn	Ile	Cys	Lys	Asn	Ile	Glu	Asn	Val	Thr	Cys	His	Leu	Glu	Lys		
65					70					75					80		
Asn	Glu	Phe	Phe	Lys	Asn	Phe	Thr	Asn	Lys	Phe	Asn	Thr	Ile	Asn	Lys		

85								90				95			
Glu	Asn	Leu	Asn	Lys	Ala	Ile	Ile	Ser	Leu	Gly	Leu	Gly	Ser	Leu	Ile
			100					105					110		
Asp	Met	Asn	Leu	Asn	Asn	Lys	Lys	Ala	Cys	Ile	Tyr	Gln	Phe	Ser	Phe
		115					120					125			
Leu	Leu	Leu	Leu	Lys	Lys	Val	Tyr	Asp	Ile	Lys	Gln	Val	Tyr	Ile	Tyr
	130					135					140				
Asp	Pro	Lys	Ile	Ser	Glu	Val	Asp	Arg	Asn	Val	Cys	Glu	Tyr	Phe	Asn
145					150					155					160
Ile	Lys	Ile	Leu	Ile	Cys	Ser	Asn	Glu	Glu	Glu	Asn	Lys	Lys	Asp	Asp
				165					170					175	
Glu	Asp	Asn	Lys	Asn	Gly	Asp	Asn	Lys	Gly	Asp	Asn	Tyr	Asn	Lys	Gly
			180					185					190		
Asp	Asn	Tyr	Asn	Lys	Glu	Asp	Asn	Tyr	Asn	Lys	Val	Asp	Asn	Tyr	Asn
		195					200					205			
Lys	Gly	Asp	Asn	Tyr	Asn	Ile	Glu	Asp	Asn	Tyr	Tyr	Lys	Glu	Asp	Asn
	210					215					220				
Tyr	Asn	Lys	Asp	Asp	Asn	Tyr	Tyr	Lys	Glu	Asp	Asn	Phe	Asn	Lys	Asp
225					230					235					240
Asp	Asn	Phe	Asn	Lys	Asp	Asp	Asn	Tyr	Asn	Lys	Glu	Asp	Asn	Tyr	Asn
				245					250					255	
Tyr	His	Asn	Phe	Met	His	Thr	Leu	Lys	His	Lys	Glu	His	Asn	Lys	Cys
			260					265					270		
Thr	His	Asn	Pro	Asn	Asp	Val	Pro	Leu	Pro	Cys	Thr	Glu	Lys	Met	Asn
		275					280					285			
Ile	Ile	Lys	Phe	Ser	Ser	Val	Met	Glu	Lys	Val	Ile	Leu	Phe	Met	Pro
	290					295					300				
His	Cys	Asp	Ile	His	Leu	Tyr	Gly	Asp	Ile	Leu	Tyr	Ser	Ile	Phe	Val
305					310					315					320
His	Glu	Lys	Leu	Phe	Tyr	Lys	Asn	Val	Gln	Phe	Tyr	Phe	Asn	Leu	Glu
				325					330					335	
Asn	Thr	Ile	Phe	Leu	Gly	Asn	Cys	Phe	Asp	Tyr	Tyr	Arg	Asp	His	Ser
			340					345					350		
Tyr	Leu	Tyr	Lys	Pro	Phe	Gly	Leu	Pro	Ser	Tyr	Val	Ile	Lys	Met	Leu
		355					360					365			
Asn	Ala	Asn	Arg	Gln	Lys	Leu	Asn	Ile	Ser	Ile	Gln	Glu	Asn	His	Met
	370					375					380				
Asn	Lys	Leu	Leu	Ala	His	Phe	Lys	Thr	Tyr	His	Phe	Ile	Phe	Tyr	Ile
385					390					395					400
Leu	Asn	Phe	Val	His	Glu	Thr	Lys	Phe	Pro	Ile	Phe	Ser	Asp	His	Ala
				405					410					415	
Gly	Ser	Phe	Asn	Asp	Leu	Ser	Ile	Thr	Ile	Phe	His	Lys	Ile	Glu	Asp
			420					425					430		
Lys	Phe	Lys	Phe	Trp	Ser	His	Val	Tyr	Glu	Ser	Leu	Asn	Asn	Met	
		435					440					445			

&lt;211&gt; 1224

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 115

Met Lys Pro Val His Phe Asn Asn Ser Ile Ile Asn Glu Asp Asn Leu  
 1 5 10 15

Asp Leu Leu Gln Cys Asp Asp Lys Lys Lys Glu Gly Ser Phe Asn Ile  
 20 25 30

Phe Asn Asn Asn Asn Asn Gln Ile Asn Asn Val Ile Tyr Asp Lys Asn  
 35 40 45

Val Phe Pro Asn Asn Tyr Val Gln Asn Lys Ser His Ile Asn Ser Glu  
 50 55 60

Tyr Val Asn Asn Met Asp Tyr Leu Ser Leu His Thr Gly Ile Glu Lys  
 65 70 75 80

Tyr Lys Tyr Arg Lys Asn Asn Asn Asn Val Lys Asn Met Ile Leu Lys  
 85 90 95

Asp Glu Asp Ile Leu Tyr Asp Tyr Asn Ile His Leu Ser Asn His Leu  
 100 105 110

Ile Asn His Asp Ile Asn Phe Ile Tyr Ser Ser Asn Asn Ile Phe Asn  
 115 120 125

Leu Cys Asn Asn Lys Asn Pro Lys Tyr Phe Pro Asn Ser Lys Asn Ser  
 130 135 140

Asn Glu Ile Lys Lys Asp His Lys Asn Lys Val Asn Val Tyr Thr Asn  
 145 150 155 160

Asn Ile His Tyr His Thr Lys Lys Asn Lys Asn Phe Tyr Ser Asn Pro  
 165 170 175

Thr Glu Val Asn Tyr Asn Ser Leu Leu Ser Asn Asn Leu Lys His Asn  
 180 185 190

Ser Leu Tyr Tyr Ser Phe Arg Lys Asp Thr Ser Asn Phe Asn Phe Ser  
 195 200 205

Cys Asp Lys Asn Asn Thr Thr Phe Ser Lys Pro Asn Cys Leu His Glu  
 210 215 220

Ser Asn Pro Ser Ser Thr Ser Thr Cys Tyr Pro Asn Val Asn Thr Ile  
 225 230 235 240

Pro Leu Ala Ile Asn Leu Leu Asn Asn Val Asn Asp Asp Ile Ser Pro  
 245 250 255

Ile His Pro Leu Pro Leu Ser Glu Ser Ser Ser Thr Ser Ala Ser Thr  
 260 265 270

Ser Ala Ser Ala Ser Thr Ser Ala Ser Thr Ser Ala Ser Thr Ser Val  
 275 280 285

Ser Thr Ser Val Ser Thr Ser Val Ser Thr Ser Ala Ser Thr Thr Met  
 290 295 300

Asn Ser Pro Arg Pro Ser Asp Asn His Ile Ser Asn Ser Phe Pro Leu  
 305 310 315 320

Ser Arg Glu Ser Arg Ala Thr Glu Gln Val Asn Arg Leu Tyr Phe Pro  
 325 330 335

Val Asn Asp Val Thr Ser Lys Ser Asp Pro Asn Pro Asn Asn Glu Leu  
 340 345 350

Thr	Ser	Asn	Met	Asn	Pro	Lys	His	Glu	Pro	Ile	Cys	Glu	Glu	Thr	Arg	
		355					360					365				
Asn	Asp	Asn	Gly	His	Ile	Arg	Asn	Asn	Ser	Ile	Tyr	Pro	Leu	Ser	His	
	370					375					380					
Lys	Ser	Ser	Tyr	Asn	Ile	Thr	Thr	Lys	Gly	His	Thr	Asn	Gln	Leu	Glu	
385					390					395					400	
Asp	Glu	Lys	Leu	His	Arg	Asp	Asp	Asn	Ser	Met	Phe	Asp	Lys	Val	Ser	
				405					410					415		
Tyr	Glu	Trp	Lys	Asp	Glu	Asp	Glu	Lys	Asn	Asp	Cys	Arg	Asn	Glu	Tyr	
			420					425					430			
Asp	Glu	Tyr	Phe	Gln	Lys	Lys	Lys	Lys	Tyr	Asn	Tyr	Leu	Leu	Pro	Lys	
		435					440					445				
Glu	Asn	Glu	Lys	Asp	Lys	Ser	Thr	Lys	Gly	Lys	Ile	Arg	Glu	Leu	Tyr	
	450					455					460					
Asn	Asn	Phe	Lys	Asn	Thr	Leu	Asn	Lys	Leu	Cys	His	Glu	Ile	Phe	Phe	
465					470					475					480	
Asn	Ser	Phe	Gln	Thr	Met	Phe	Ser	Tyr	Phe	Ile	Thr	Thr	Ser	Phe	Phe	
				485					490					495		
Ile	Ile	Ile	Asn	Leu	Tyr	Val	Ser	Asn	Val	Cys	Thr	Tyr	Gln	Glu	Ile	
			500					505					510			
Ala	Gly	Phe	Gly	Val	Ser	Ile	Ser	Ile	Ile	Thr	Ile	Leu	Asn	Cys	Ile	
		515					520					525				
Val	Asp	Gly	Val	Leu	Asn	Ser	Leu	Asp	Tyr	Phe	Cys	Ser	His	Ser	Ile	
	530					535					540					
Gly	Ile	Gly	Asn	Met	Asp	Lys	Ala	Trp	Leu	Tyr	Leu	Asn	Cys	Ala	Tyr	
545					550					555					560	
Tyr	Phe	Phe	Tyr	Lys	Leu	Tyr	Phe	Leu	Leu	Phe	Val	Phe	Phe	Phe	Leu	
				565				570						575		
Phe	Lys	Trp	Leu	Thr	Phe	Lys	Ile	Ile	Arg	Asn	Ile	Phe	Val	Ala	His	
			580					585					590			
Met	Met	Asn	Glu	Tyr	Leu	Met	Met	Ile	Lys	Val	Phe	Phe	Ser	Thr	Val	
		595					600					605				
Gln	Ile	Leu	Leu	Val	Cys	Tyr	Phe	Pro	Tyr	Phe	Ile	Tyr	Glu	Thr	Met	
	610					615					620					
Arg	Arg	Phe	Leu	Ile	Leu	Tyr	Asn	Asn	Ile	Tyr	Pro	Ser	Ile	Tyr	Thr	
625					630					635					640	
Ser	Ile	Ile	Ser	Val	Ile	Cys	Leu	Asn	Ile	Phe	Cys	Tyr	Ile	Phe	Ile	
				645					650					655		
Ile	Lys	Ile	Ser	Met	Leu	Tyr	Thr	Gly	Ala	Pro	Ile	Ala	Leu	Leu	Phe	
			660					665					670			
Thr	Asn	Ile	Ile	Asn	Met	Cys	Met	Ile	Met	Tyr	Phe	Leu	Lys	Ala	Phe	
		675					680					685				
Ile	Tyr	Arg	Cys	Val	Val	Arg	Pro	Thr	Asn	Ile	Ile	Ser	Ser	Leu	Arg	
	690					695					700					
Asp	Gly	Glu	Glu	Phe	Met	Ser	Cys	Glu	Ser	Ile	Pro	Met	Asp	Arg	Gln	
705					710					715					720	

His Leu Thr Gly Asn Asn Leu Tyr Lys Asn Ile Asn Asn Gly Asp Arg  
 725 730 735  
 Asn Asp Gly Val His Gly His Val Cys Ala Glu Glu Ser Cys Val Tyr  
 740 745 750  
 Glu Asp Phe Ser Ser Pro Asn Glu Asp Asn Leu Glu Arg Glu Gln Asn  
 755 760 765  
 Lys Ile Asn Asp Asn Asn Cys Asp Glu Lys Asn Asn Asn Cys Asp Glu  
 770 775 780  
 Lys Asn Asn Ser Cys Asp Glu Lys Asn Asn Ser Cys Asp Glu Lys Asn  
 785 790 795 800  
 Asn Ser Cys Asp Glu Lys Asn Asn Asn Cys Asp Lys Thr Lys Trp Thr  
 805 810 815  
 Cys His Lys Leu Leu Glu Asp Asn Tyr Tyr Lys Lys Tyr Asn Val Ser  
 820 825 830  
 Ile Pro His Arg Tyr Asn Ser Met Asp Ser Val Leu Asp Phe Tyr Asp  
 835 840 845  
 Asp Tyr Asp Tyr Tyr His Asn Met Asp Thr Tyr Asn Tyr Phe Asn Asp  
 850 855 860  
 Lys Cys Lys Asn Asn Cys Lys Lys Cys Cys Lys Lys Val Lys Val Arg  
 865 870 875 880  
 Lys Ser Gln Arg Glu Asn Lys Lys Asn Ile Thr Lys Tyr Ile Asn Asn  
 885 890 895  
 Asn Lys Asn Phe Gly Lys Asn Lys Asn Tyr Gly Lys Asn Lys Asn Tyr  
 900 905 910  
 Gly Lys Asn Lys Asn Tyr Gly Lys Asn Lys Asn Tyr Gly Lys Asn Lys  
 915 920 925  
 Asn Tyr Gly Asn Asn Lys Asn Tyr Gly Asn Asn Asn Ser His Val Phe  
 930 935 940  
 Ile Lys Asn Lys Glu Met Tyr Asn Phe Leu Phe Leu Phe Phe Asn Ile  
 945 950 955 960  
 Pro Ser Val Glu Thr Arg Asn Lys Phe Phe Cys Ile Thr Lys Thr Asn  
 965 970 975  
 Ile Lys Asn Ile Phe Phe Glu Ile Leu Ser Phe Glu Leu Gln Leu Phe  
 980 985 990  
 Glu Ser Thr Tyr Leu Cys Leu Thr Ser Val Ala Ala Tyr Val Gln Ile  
 995 1000 1005  
 Asn Asn Phe Leu Asn Leu Val Tyr Tyr Leu Ser Asn Ser Tyr Gly Ile  
 1010 1015 1020  
 Ile Leu Ala Lys Leu Ile Gly Val Tyr Ile Ser Ser Gln Arg Lys Arg  
 1025 1030 1035 1040  
 Glu Lys Asp Asn Gln Asn Lys Lys Tyr Asn Glu Tyr Asn Leu Lys Glu  
 1045 1050 1055  
 Pro Met Lys Glu Tyr Thr Lys Leu Phe Val Glu Lys Asn Glu Glu Val  
 1060 1065 1070  
 Asn Asp Ile Lys Asn Lys Lys Asn Phe Ser Leu Thr Glu Ile Cys Leu  
 1075 1080 1085  
 Ala Phe Phe Leu Leu Leu Ser Phe Leu Tyr Thr Cys Leu Thr Val Leu

1090 1095 1100

Tyr Val Tyr His Lys Asn Ile Ile Ile Phe Phe Tyr Thr Asp Met Lys  
 1105 1110 1115 1120

Leu Gln Asn Gln Leu Ile Asn Ile Phe Asn Ile Leu Asn Leu Glu Leu  
 1125 1130 1135

Tyr Phe Glu Ala Leu Ala Ser Leu Leu Asn Ser Val Ile Lys Gly Leu  
 1140 1145 1150

Ser Leu Gln Asn Glu Ile Thr Ser Phe Thr Phe Phe Asn Phe Met Phe  
 1155 1160 1165

Leu Met Asn Ile Leu Gly Leu Phe Leu Ser Phe Phe Leu Lys Trp Glu  
 1170 1175 1180

Leu Tyr Gly Phe Ile Tyr Ser Asn Leu Ile Cys Met Ile Leu Gln Val  
 1185 1190 1195 1200

Leu Tyr Leu Ile Ile Phe Leu Thr Asn Lys Phe Tyr Ile Lys Asn Thr  
 1205 1210 1215

His Lys Glu Gln Ile Phe Ser Tyr  
 1220

<210> 116  
 <211> 365  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 116

Met Ser Glu Gln Gly Asn Leu Ser Ser His Asn Met Lys Ser Lys Met  
 1 5 10 15

Asp Arg Asn Asp Ser Asp Lys Val Lys Cys Lys Asn Gln Glu Gly Ile  
 20 25 30

Asn Glu Cys Val Asn Lys Glu Asn Thr Gln Glu Glu Asn Gln Asn Ile  
 35 40 45

His Asp Glu Lys Lys Lys Ser Cys Glu Gln Asn Arg Asn Asn Ile Thr  
 50 55 60

Leu Asp Asp Asp Val Asn Ile Asn Lys Ile Val Glu Arg Met Ser Val  
 65 70 75 80

Glu Glu Pro Glu Val Leu Thr Lys Ile Phe Asn Leu Met Lys Asn Asn  
 85 90 95

Asn Cys Leu Asn Phe Tyr Pro Leu Leu Thr Pro Tyr His Asn Ile Glu  
 100 105 110

Lys Ile Val Asp Ile Leu Met Gln Glu Asn Tyr Glu Tyr Glu Asn Thr  
 115 120 125

Trp Thr Val His Cys Asp Ala Ser Phe Ile Cys Arg Leu Leu Tyr Glu  
 130 135 140

Gly Phe Ile Pro Val Ala Ser Lys Gln Lys Leu Tyr Lys Ile Glu Asn  
 145 150 155 160

Tyr Glu Thr Val Met Tyr Lys Glu Cys Leu Leu Ile Pro Lys Ile His  
 165 170 175

Phe Ile Arg Ser Cys Met His Pro Ser Glu Ile His Ile Ser Lys Lys  
 180 185 190

Val Lys Lys Lys Cys Lys His Phe Tyr Ile Thr Ile Asp Lys Asn Phe



195                                      200                                      205  
 Glu Gly Val Met Glu Gly Ile Val Glu Lys His Gly Gln Asn Trp Leu  
     210                                      215                                      220  
 Tyr Pro Phe Val Gln Glu Phe Lys Lys Ile Phe Tyr Lys His Val  
     225                                      230                                      235                                      240  
 Thr Tyr Lys Asn Val Glu Leu His Ser Val Glu Leu Trp Phe Gly Lys  
                                     245                                      250                                      255  
 Glu Leu Val Ala Gly Glu Ile Gly Asn Thr Val Gly Ser Ile Tyr Thr  
                                     260                                      265                                      270  
 Ser Leu Thr Gly Phe Gln Arg Lys Ser Cys Ala Gly Thr Ile Gln Leu  
                                     275                                      280                                      285  
 Cys Ala Leu Ala Lys Leu Leu Glu Ile Gln Lys Phe Glu Leu Trp Asp  
                                     290                                      295                                      300  
 Leu Gly Met Leu Leu Pro Tyr Lys Lys Asp Ile Gly Ser Lys Glu Ile  
     305                                      310                                      315                                      320  
 Thr Met Lys Glu Phe Phe Arg Lys His Arg Leu Phe Lys His Gln Pro  
                                     325                                      330                                      335  
 Ala Glu Phe Lys Thr Pro Phe Met Asp Lys Leu Asn Cys Ser Val Leu  
                                     340                                      345                                      350  
 Ile Lys Gly Thr Asp Pro Gln Thr Leu Lys Glu Gln Glu  
                                     355                                      360                                      365

&lt;210&gt; 117

&lt;211&gt; 166

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 117

Met Lys Gly Ser Asp Tyr Leu Ile Leu Leu Lys Gln Lys Val Val Asn  
     1                                      5                                      10                                      15  
 Phe Ile Tyr Trp Tyr Asn Ser Ser Ser Ile Gly His Arg Asn Phe Val  
                                     20                                      25                                      30  
 Trp Val Phe Ile Gly Ile Gly Cys Gly Tyr Ile Tyr Gly Thr Leu Glu  
                                     35                                      40                                      45  
 Tyr Lys Lys Lys Ile Arg Asp Lys Gly Ile Tyr Gly Asp Phe Ile Tyr  
                                     50                                      55                                      60  
 Val Asp Glu Tyr Ile Val Asp Asp Gln Asn Lys Lys Gln Phe Glu Lys  
     65                                      70                                      75                                      80  
 Asn Tyr Asn Lys Leu Asn Ile His Ser Phe Lys Asn Lys Gly Tyr Glu  
                                     85                                      90                                      95  
 Tyr Thr Lys Met Phe Lys Ala Ile Lys Asn Glu Asn Cys Pro Leu Ser  
                                     100                                      105                                      110  
 Tyr Leu Gln Leu Arg Leu Trp Arg Asn Lys Asn Cys Tyr Glu Gln Tyr  
                                     115                                      120                                      125  
 Val Asn Asn Lys Asn Ile Gln Thr Leu Leu Thr Asn Leu Lys Asp Thr  
                                     130                                      135                                      140  
 Cys Ile Phe Tyr Ser Thr Gln Lys Tyr Lys Thr Ile Val Asp Asp Ser  
     145                                      150                                      155                                      160  
 Ile Val Arg Leu Ile Pro

165

<210> 118  
 <211> 328  
 <212> PRT  
 <213> Plasmodium falciparum

&lt;400&gt; 118

Met	Gly	Lys	Asp	Tyr	Tyr	Ser	Ile	Leu	Gly	Val	Ser	Arg	Asp	Cys	Thr
1				5					10					15	
Thr	Asn	Asp	Leu	Lys	Lys	Ala	Tyr	Arg	Lys	Leu	Ala	Met	Met	Trp	His
			20					25					30		
Pro	Asp	Lys	His	Asn	Asp	Glu	Lys	Ser	Lys	Lys	Glu	Ala	Glu	Glu	Lys
		35					40					45			
Phe	Lys	Asn	Ile	Ala	Glu	Ala	Tyr	Asp	Val	Leu	Ala	Asp	Glu	Glu	Lys
	50					55					60				
Arg	Lys	Ile	Tyr	Asp	Thr	Tyr	Gly	Glu	Glu	Gly	Leu	Lys	Gly	Ser	Ile
65					70					75					80
Pro	Thr	Gly	Gly	Asn	Thr	Tyr	Val	Tyr	Ser	Gly	Val	Asp	Pro	Ser	Glu
				85					90					95	
Leu	Phe	Ser	Arg	Ile	Phe	Gly	Ser	Asp	Gly	Gln	Phe	Ser	Phe	Thr	Ser
			100					105					110		
Thr	Phe	Asp	Glu	Asp	Phe	Ser	Pro	Phe	Ser	Thr	Phe	Val	Asn	Met	Thr
		115					120					125			
Ser	Arg	Lys	Ser	Arg	Pro	Ser	Thr	Thr	Thr	Asn	Ile	Asn	Thr	Asn	Asn
	130					135					140				
Tyr	Asn	Lys	Pro	Ala	Thr	Tyr	Glu	Val	Pro	Leu	Ser	Leu	Ser	Leu	Glu
145					150					155					160
Glu	Leu	Tyr	Ser	Gly	Cys	Lys	Lys	Lys	Leu	Lys	Ile	Thr	Arg	Lys	Arg
				165					170					175	
Phe	Met	Gly	Thr	Lys	Ser	Tyr	Glu	Asp	Asp	Asn	Tyr	Val	Thr	Ile	Asp
			180					185					190		
Val	Lys	Ala	Gly	Trp	Lys	Asp	Gly	Thr	Lys	Ile	Thr	Phe	Tyr	Gly	Glu
		195					200					205			
Gly	Asp	Gln	Leu	Ser	Pro	Met	Ala	Gln	Pro	Gly	Asp	Leu	Val	Phe	Lys
	210					215					220				
Val	Lys	Thr	Lys	Thr	His	Asp	Arg	Phe	Leu	Arg	Asp	Ala	Asn	His	Leu
225					230					235					240
Ile	Tyr	Lys	Cys	Pro	Val	Pro	Leu	Asp	Lys	Ala	Leu	Thr	Gly	Phe	Gln
				245					250					255	
Phe	Ile	Val	Lys	Ser	Leu	Asp	Asn	Arg	Asp	Ile	Asn	Val	Arg	Val	Asp
			260					265					270		
Asp	Ile	Val	Thr	Pro	Lys	Ser	Arg	Lys	Ile	Val	Ala	Lys	Glu	Gly	Met
		275					280					285			
Pro	Ser	Ser	Lys	Tyr	Pro	Ser	Met	Lys	Gly	Asp	Leu	Ile	Val	Glu	Phe
		290				295					300				
Asp	Ile	Val	Phe	Pro	Lys	Ser	Leu	Thr	Ser	Glu	Lys	Lys	Lys	Ile	Ile
305					310					315					320
Arg	Glu	Thr	Leu	Ala	Asn	Thr	Phe								

325

<210> 119  
 <211> 119  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 119  
 Met Tyr Thr His Leu Ile Phe Ser Val Phe Pro Arg Phe Val His Gln  
           1                  5                  10                  15  
 Ile Ser Ser Gln Ile Lys Lys Ile Ile Lys Lys Asn Phe Glu Tyr Ala  
                   20                  25                  30  
 Lys Asp Phe Phe Cys Lys Arg Ser Tyr Thr Tyr Gln Asp Phe Lys Gln  
                   35                  40                  45  
 Arg Cys Glu Ser Leu Arg Leu Phe Leu Tyr Phe Gly Ile Val Thr Phe  
                   50                  55                  60  
 Leu Ser Leu Asp Leu Leu Ile Asn Pro Leu Gln Ser Ser Tyr Trp Asp  
                   65                  70                  75                  80  
 Lys Tyr Ser Pro Ser His Leu Ser Arg Lys Cys Val Val Phe Phe Ser  
                           85                  90                  95  
 Asn Lys Gln Asn Asp Ile Phe Arg His Asp Gly Asn Leu Leu Tyr Glu  
                   100                  105                  110  
 Lys Tyr Ile Gln Leu Ile Asn  
                   115

<210> 120  
 <211> 320  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 120  
 Met Lys Asp Ile Leu Ser Asn Tyr Ser Asn Leu Ile Tyr Leu Asn Lys  
           1                  5                  10                  15  
 Tyr Val Lys Glu Lys Asp Lys Tyr Ile Asn Asp Tyr Arg Ile Ile Arg  
                   20                  25                  30  
 Thr Leu Asn Gln Gly Lys Phe Asn Lys Ile Ile Leu Cys Glu Lys Asp  
                   35                  40                  45  
 Asn Lys Phe Tyr Ala Leu Lys Lys Tyr Glu Lys Ser Leu Leu Glu Lys  
                   50                  55                  60  
 Lys Arg Asp Phe Thr Lys Ser Asn Asn Asp Lys Ile Ser Ile Lys Ser  
                   65                  70                  75                  80  
 Lys Tyr Asp Asp Phe Lys Asn Glu Leu Gln Ile Ile Thr Asp Ile Lys  
                           85                  90                  95  
 Asn Glu Tyr Cys Leu Thr Cys Glu Gly Ile Ile Thr Asn Tyr Asp Glu  
                   100                  105                  110  
 Val Tyr Ile Ile Tyr Glu Tyr Met Glu Asn Asp Ser Ile Leu Lys Phe  
                   115                  120                  125  
 Asp Glu Tyr Phe Phe Val Leu Asp Lys Asn Tyr Thr Cys Phe Ile Pro  
                   130                  135                  140  
 Ile Gln Val Ile Lys Cys Ile Ile Lys Ser Val Leu Asn Ser Phe Ser  
                   145                  150                  155                  160

Tyr Ile His Asn Glu Lys Asn Ile Cys His Arg Asp Val Lys Pro Ser  
 165 170 175  
 Asn Ile Leu Met Asp Lys Asn Gly Arg Val Lys Leu Ser Asp Phe Gly  
 180 185 190  
 Glu Ser Glu Tyr Met Val Asp Lys Lys Ile Lys Gly Ser Arg Gly Thr  
 195 200 205  
 Tyr Glu Phe Met Pro Pro Glu Phe Phe Ser Asn Glu Ser Ser Tyr Asn  
 210 215 220  
 Gly Ala Lys Val Asp Ile Trp Ser Leu Gly Ile Cys Leu Tyr Val Met  
 225 230 235 240  
 Phe Tyr Asn Val Val Pro Phe Ser Leu Lys Ile Ser Leu Val Glu Leu  
 245 250 255  
 Phe Asn Asn Ile Arg Thr Lys Asn Ile Glu Tyr Pro Leu Asp Arg Asn  
 260 265 270  
 His Phe Leu Tyr Pro Leu Thr Asn Lys Lys Ser Thr Cys Ser Asn Asn  
 275 280 285  
 Phe Leu Ser Asn Glu Asp Ile Asp Phe Leu Lys Leu Phe Leu Arg Lys  
 290 295 300  
 Asn Pro Ala Glu Arg Ile Thr Ser Glu Asp Ala Leu Val Thr Ala Lys  
 305 310 315 320

<210> 121  
 <211> 387  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 121  
 Met Gly Ala Phe Glu Asn Ser Leu Lys Asp Ala Leu Arg Ala Lys Glu  
 1 5 10 15  
 Leu Asp Glu Asn Asn Leu Lys Ser Tyr Tyr Arg Ile Cys Glu Ala Tyr  
 20 25 30  
 Lys Ser Leu Lys Asp Ile Asp Asn Tyr Glu Lys Tyr Leu Gln Leu Tyr  
 35 40 45  
 Asn Met Lys Lys Asn Lys Lys Glu Asn Asn Glu Ser Asn Lys Ser Asn  
 50 55 60  
 Ile Asp Lys Lys Leu Leu Thr Glu Lys Asn Arg Lys Asn Glu Glu His  
 65 70 75 80  
 Asn Lys Asn Lys Asn Ile Asn Asn Asn Tyr Tyr Asn Asn Asp Phe Glu  
 85 90 95  
 Lys Glu Gln Asn Gln Gln Arg Lys Asp Lys Ile Ile Thr Ser Asn Glu  
 100 105 110  
 Leu Ile Asp Ile Cys Asp Asn Ile Glu Glu Lys Asn Pro Phe Leu Phe  
 115 120 125  
 Phe Pro Asn Ser Gln Leu Asn Asn Thr Ile Ser Asn Ile Gln Phe Glu  
 130 135 140  
 Lys Lys Lys Tyr Lys Asn Asn Phe Leu Ile Glu Glu Val Tyr Asp Phe  
 145 150 155 160

Lys Asn Leu Lys Asn Gln Asn Ser Leu Gln Ser Thr Asn Thr Lys Lys  
 165 170 175  
 Cys Ile Val His Asn Glu Glu Lys Ile Asn Tyr His Asp Ile Tyr Asp  
 180 185 190  
 Asp Ile Lys Thr Cys Leu His Thr Phe Lys His Phe Phe Phe Asp Asn  
 195 200 205  
 Val Pro Lys Val Ile His Ile Glu Lys Glu Asn Lys Ile Asn Met Gln  
 210 215 220  
 His Thr Asn Tyr Asp Ile His Ser Met Lys Asn Gln Ala Asp His Phe  
 225 230 235 240  
 Phe Ser His Lys Gln Tyr Tyr Ala Ala Leu Asn Met Tyr Asn Glu Ile  
 245 250 255  
 Met Glu Lys Cys Lys Ser Glu Glu Ser Val Phe Tyr Cys Ser Leu Leu  
 260 265 270  
 Ser Asn Arg Ser Ser Cys Phe Ile Lys Met Lys Lys Ile Ile Ser Ser  
 275 280 285  
 Leu Cys Asp Ile His Gln Ala Ile Lys Ile Leu Leu Leu Leu Leu Glu  
 290 295 300  
 Lys His Val Glu Tyr Ile Lys Lys Asp Asn Arg Thr Glu Leu Glu Asp  
 305 310 315 320  
 Lys Asp Ile Asn Lys Met Phe Glu Ser Ile Asp Ile Gln Thr Phe Lys  
 325 330 335  
 Asn Ile Glu Gly Ile Tyr Met Lys Thr His Lys Leu Leu Ile Arg Leu  
 340 345 350  
 Leu Phe Arg Tyr Ala Ser Tyr Ser Tyr Ile Asn Pro Lys Tyr Phe Lys  
 355 360 365  
 Val Phe Ser Leu Asn Glu Val Lys Asn Lys Asn Ile Tyr Ile Arg Lys  
 370 375 380  
 Ile Asn Lys  
 385

<210> 122  
 <211> 2013  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 122  
 Met Ala Asn Cys Arg Tyr Asn Ser Ser Leu Pro Phe His Phe Ile Ser  
 1 5 10 15  
 Asp Asn Ile Phe Cys Phe Leu Lys Asp Gly Tyr Ile Cys Phe Met Asn  
 20 25 30  
 Leu Leu Asn Asn Glu Lys Lys Tyr Leu Tyr Ile Thr Cys Ser Gln Asp  
 35 40 45  
 Glu Gly Tyr Val Ala Gln Tyr Tyr Phe Asp Val Val Lys Cys Arg Tyr  
 50 55 60  
 Glu Lys Lys Glu Glu Asp Cys Asn Lys Asn Met Thr Ile Asn Ile Met  
 65 70 75 80  
 Leu Leu Gln Asn Glu Asn Lys Lys Ile Ile Lys Glu Thr Cys Tyr Ile  
 85 90 95

Lys Asn Val Val Thr Asn Lys Ile Tyr His Thr Leu Phe Leu Val ~~File~~  
 100 105 110  
 Asn Lys His Tyr His Asn Ile Leu Cys Ser Leu Ser Phe Glu Asn Asn  
 115 120 125  
 Ser Phe Glu Ile Leu Asn Thr Asn Phe Val Lys Thr Phe Lys Gly Lys  
 130 135 140  
 Ile Lys Ser Met Ala Cys Thr Asn Asn Asn Ile Phe Val Leu Ile Lys  
 145 150 155 160  
 Lys Lys Lys Lys Ile Ile Asn Lys Asn Lys Asn Asn Gln Met Lys Ser  
 165 170 175  
 Lys Ile Leu Asn Gln Asn Val Leu Val Ser Lys His Thr Leu Asp Arg  
 180 185 190  
 Ser Leu Leu Leu Met Lys Gly Glu Asn Asp Val Asn Val Ile Cys Glu  
 195 200 205  
 Ser Lys Lys Glu Lys Lys Lys Lys Lys Lys Lys Thr Asp Asn Lys Asn  
 210 215 220  
 Glu Lys Lys Lys Gly His Met Glu Ile Lys Asp Val Asn Glu Lys Ile  
 225 230 235 240  
 Asn Glu Lys Ile Asn Glu Glu Lys Asn Glu Lys Ile Asn Glu Glu Lys  
 245 250 255  
 Asn Glu Glu Lys Asn Glu Glu Lys Asn Glu Lys Ile Asn Glu Glu Lys  
 260 265 270  
 Asn Glu Glu Lys Asn Glu Lys Ile Asn Glu Glu Lys Asn Glu Asp Thr  
 275 280 285  
 Asn Lys Asp Pro Tyr Glu Glu Lys Glu Asn Asp Asn Ile Pro Leu Gly  
 290 295 300  
 Asp His His Ser Val Gln Tyr Asn Ile Phe Thr Phe Ser Ile Leu Asn  
 305 310 315 320  
 Lys Lys Glu Pro Asp Leu Lys Lys Ile Gln Phe Ser Asn Ile Ile Leu  
 325 330 335  
 Pro Ile Lys Lys Met Ile Ile Cys Pro Tyr Asp Glu Lys Ile Ile Ile  
 340 345 350  
 Leu Leu Ser His Lys Ser Ile Val Tyr Ile Ile Thr Asn Lys Asn Asn  
 355 360 365  
 Asp Asp Leu Lys Asn Met Phe Ile Ile Lys Glu Leu Ile Phe Asn Ser  
 370 375 380  
 Pro Ile Ile Thr Thr Thr Trp Ile Asp Asn Tyr Ile Phe Leu Ile Tyr  
 385 390 395 400  
 Phe Leu Asn Asn Glu Leu Ile Phe Leu Ser Phe Ala Lys Pro Cys Arg  
 405 410 415  
 Asn Leu Tyr Phe Tyr Lys Cys Ile Asn Asn Tyr Ser His Ile Thr Ser  
 420 425 430  
 Phe Phe Tyr Lys Ser Arg Asn Leu Tyr Ile Ser Phe Lys Thr Lys Glu  
 435 440 445  
 Ile Val Cys Phe Lys Ile Arg Tyr Tyr Glu Ile Pro Leu Thr Val Phe  
 450 455 460  
 Lys Lys Ile Gln Thr Thr Glu Gly Asn Tyr Ile Asp Ala Lys Tyr Leu  
 465

465	470								475								480
Phe Arg Lys Arg Pro Arg Tyr Ile Asn Thr Asn His Asn Gln Ser Asn																	
	485								490								495
Ala Lys Asp Asp Lys Asp Gly Asn Asp Val Ile Arg Glu Glu Glu Asp																	
	500								505								510
Phe Leu Arg Asn Asn Asn Lys Asn Phe Ser Asp Val Lys Lys Arg Lys																	
	515								520								525
Lys Arg Asn Asp Lys Asn Asn Tyr Glu Ile Ile Phe Asn Asn Ile Leu																	
	530								535								540
Arg Glu Ile Lys Thr Leu Glu Asn Lys Ile Ser Asn Asn Asp Tyr Asn																	
	545								550								555
Ile Phe Tyr Glu Asp Gly Glu Ile Asn Lys Asp Glu Leu Lys Asn Arg																	
	565								570								575
Leu Ser Ala Arg Ser Leu Ser Val Tyr Asn Lys Tyr Phe Asn Leu Asn																	
	580								585								590
Leu Leu Gly His Asn Asn Asn Lys Lys Lys Trp Ile Arg Gln Asp Ile																	
	595								600								605
Arg Asn Asn Met Tyr His Asn Lys Tyr Asn Cys Val Glu Glu Asp Val																	
	610								615								620
Cys Ile Asn Arg Tyr Ile Glu Lys Glu Ser Ile Phe Tyr Glu Tyr Asp																	
	625								630								635
Asn Asn Asn Asn Asp Asn Met Leu Trp Ser His Leu Tyr Phe Leu Lys																	
	645								650								655
Lys Lys Lys Lys Lys Lys Phe Asp Asn Phe His Tyr Asn Asp Glu Asn																	
	660								665								670
Val Ile Lys Leu Leu Asp Phe Val Ser Ile Ile Asn Leu His Lys Tyr																	
	675								680								685
Ile Leu Asn Asn Ile Thr Ser Phe Tyr Ile Met Ser Lys Tyr Leu Phe																	
	690								695								700
Val Leu Leu Asp Asn Gly Leu Leu Tyr Tyr Thr Lys Lys Asn Asp Asp																	
	705								710								715
Gly Lys Ile Tyr Asp Phe Leu Glu Leu Ser Asn Phe Tyr Ile Cys Tyr																	
	725								730								735
Tyr Lys Asn Ile Asn Lys Ile Val Asp Ile Lys Ile Ile Asn Glu His																	
	740								745								750
Asp Ile Tyr Tyr Met Asp Lys Lys His Ile Leu Lys Asn His Ser Leu																	
	755								760								765
Lys Asn Asn Tyr Leu Asn Ile Ile Asn Thr Lys Glu Lys Ile Gln Ser																	
	770								775								780
Tyr Asn Ile Phe Ser Met Leu Glu Asn Cys Thr Cys Ile Phe Leu Ser																	
	785								790								795
Leu Asn Asp Gly Ser Phe Tyr Phe Ile Asn Ile Thr Lys His Lys Ile																	
	805								810								815
Leu Leu Tyr Glu Asn Leu Gln Asn Phe Ser Asn Leu Gly His Asn Gln																	
	820								825								830
Ile Tyr Cys Asn Phe Lys Lys Asn Lys Tyr Ile Gln Tyr Ser Val Phe																	
	835								840								845

Asn Lys Leu Asn Glu Tyr Ile Phe Asn Gly Tyr Phe Tyr Val Gln Gln  
 850 855 860  
 Tyr Ile Ile Phe Phe Phe Leu Ile Tyr Ser Thr Ser His Lys Lys Phe  
 865 870 875 880  
 Phe Ile Tyr Leu Val Glu Asn Ile His Ile Tyr Ile Leu Phe Lys Lys  
 885 890 895  
 Ile His Gln Thr Asn Ile Leu Tyr Lys Asn Lys Glu Lys Asn Gln Asn  
 900 905 910  
 Gln Asn Glu Asn Ile Ile Asn Met Lys Arg Gln Lys Glu Ser Ser Asn  
 915 920 925  
 Tyr Ile Leu Tyr Asn Phe Tyr Leu Tyr Lys Thr Leu Asn Lys Asp Tyr  
 930 935 940  
 Val Cys Leu Leu Cys Ser Asp Lys Ser Val Ser Tyr Phe Tyr Met Phe  
 945 950 955 960  
 Phe Phe Asp Leu Pro Arg Glu Glu Glu Ile Lys Met Tyr Ile Ser Asp  
 965 970 975  
 Lys Lys Lys Lys Lys Lys Ile Asn Asn Ser Asn Asp Asn Lys Lys Tyr  
 980 985 990  
 Ile Tyr Asn Arg Ser Asn Lys Asp Asn Asp Asn Asn Tyr Lys Glu Asn  
 995 1000 1005  
 Gln Lys Asn Glu Val Glu Asn Tyr His Tyr Asp Asp Asp Asp Asp Asp  
 1010 1015 1020  
 Asn Lys Ser Tyr Pro Leu Tyr Thr Arg Asn Ile Phe Phe Cys Ser Ile  
 1025 1030 1035 1040  
 Lys Asn Thr Asn Ile Val Tyr Ala Lys Cys Ile Gly Asn Tyr Met Ile  
 1045 1050 1055  
 Val Ala Asp Tyr Tyr Leu Asn Ile Thr Phe Tyr Tyr Ile Lys Asp Asn  
 1060 1065 1070  
 Phe Asn Asn Tyr Tyr Met Ser Ser Gly Glu Thr Pro Ser Ser Phe Phe  
 1075 1080 1085  
 Val Ser His Lys Leu Glu Glu Pro Cys Val Tyr Lys Met Lys Lys Lys  
 1090 1095 1100  
 Lys Glu Lys Gln Lys Tyr Thr Cys Asn Met Lys Glu Glu Ser Glu Ser  
 1105 1110 1115 1120  
 Lys Ile Asp Tyr Ser Thr Asn His Asn Met Gln Asn Met Met Gln Arg  
 1125 1130 1135  
 Phe Phe Phe Leu Lys Arg Lys Lys Leu Lys Asn Lys Thr Glu Phe Asn  
 1140 1145 1150  
 Asp Asn Met Ile Lys Glu Asp Lys Leu Glu Glu Lys Ile Asn Glu Asp  
 1155 1160 1165  
 Phe Val Ile Thr Glu Glu Gly Glu Lys Lys Ser Asn Lys Lys Ile Lys  
 1170 1175 1180  
 Asn Asn Thr Gln His Asn Asp Asn Asn Asn Asn Asn Asp Val Phe Ile  
 1185 1190 1195 1200  
 Cys Asn Ser Leu Tyr Glu Leu Leu Leu Asn Lys Glu Lys Ser Phe Phe  
 1205 1210 1215



Leu Asn Ile Lys His Gly Lys Leu Lys Tyr Ile Asn Glu Arg Met His  
 1220 1225 1230  
 Thr Ser Glu Leu Thr Tyr Ile Asp Ile Val Thr Thr Asn Asn Ile Leu  
 1235 1240 1245  
 Ile Cys Ile Ser Phe Asn Ser Val Asp Tyr Pro Leu Glu Ile Asn Pro  
 1250 1255 1260  
 His Ile Asn Ile Arg Tyr Met Pro Tyr Leu Asn Asn Asp Ile Gln Tyr  
 1265 1270 1275 1280  
 Tyr Tyr Pro Leu Ile Ile Lys Gly Asn Asn Asn Tyr Glu Asn Asn Asn  
 1285 1290 1295  
 Asn Met Tyr Asp Leu Phe Leu Ile Lys Lys Lys Asn Phe Leu Leu Leu  
 1300 1305 1310  
 Arg Asn Asn Ile Lys Glu Asp Glu Glu Ala Ile Ile Lys Gln Lys Glu  
 1315 1320 1325  
 Lys Asp His Ser Thr Ile Cys Asn Pro Lys Leu Ile Gln Asn Gln Gln  
 1330 1335 1340  
 Asn Asp Gln Thr Tyr Asn Thr Lys Cys Val Glu Glu Asn Val Phe Asn  
 1345 1350 1355 1360  
 Val Thr Ile Asn Ser Asn Glu His Ile Ser Phe Tyr Leu Ser Lys Trp  
 1365 1370 1375  
 Ile Ile Glu Asp Asn Asn Thr Ser Tyr Tyr Ile Asn Asp Ser Leu Ile  
 1380 1385 1390  
 Lys Asn Met Asn Ile Val Phe Leu Lys Ile Lys Asn Asp Ile Ser Gln  
 1395 1400 1405  
 Asn Tyr Thr Asn Arg Lys Arg Lys Asn Phe Phe Glu Asp Ile Val Cys  
 1410 1415 1420  
 Met Glu Lys Lys Tyr Ile Glu Asn Asn Lys Asn Asn Asn Glu Lys Met  
 1425 1430 1435 1440  
 Asn Ile Lys Val Asp Ile Asn Ile Asn Met Asn Met Pro Thr His Tyr  
 1445 1450 1455  
 Asn Ile Leu Lys Asn Lys Ile Leu Leu Leu Asn Asp Val Glu Lys Thr  
 1460 1465 1470  
 Lys Cys Ile Glu Pro Gln Asn Asn Asn His Asn Ile Asn Asn Lys Glu  
 1475 1480 1485  
 Ile Glu Phe Lys Gln Ile Ser Asn Met Asp Lys Leu Asn Glu Glu Lys  
 1490 1495 1500  
 Thr Tyr Ile Leu Lys Asp Lys Asn Tyr Ile Ile His Asn Lys Asn Thr  
 1505 1510 1515 1520  
 Asn Tyr Phe Phe Asp Asn Glu Thr Ile Ile Phe Thr Phe Ile Lys Asp  
 1525 1530 1535  
 Asn Ser Ser Gln Asn Ile Ser Leu Lys Lys Cys Leu Lys Ile Tyr Gln  
 1540 1545 1550  
 Asn Lys Tyr Tyr Leu Gln Glu Lys Tyr Glu Lys Lys Lys Lys Leu Glu  
 1555 1560 1565  
 Lys Lys Ile Thr Tyr Leu Arg Lys Gln Leu Asn Asp Leu Ile Lys Thr  
 1570 1575 1580  
 Asn Tyr Gln Asn Glu Gln Met Lys Ile Asp Arg Cys Thr Phe Phe Phe

1585	1590	1595	1600
Asp Lys Lys Tyr Ile Asn Glu Glu Asp Ile Leu Ile Tyr Glu Tyr Lys	1605	1610	1615
Lys Ile Lys Lys Lys Phe Lys Asn Thr Lys Lys Gln Lys Leu Tyr Ile	1620	1625	1630
Ile Asn Lys Leu Gln Lys Lys Cys Ser Ile Leu Asn Lys Ile Asp Phe	1635	1640	1645
Leu Ser Ala Phe Lys Lys Asn Leu Tyr Val Val Asn Phe Tyr Asn Asn	1650	1655	1660
Gln Thr Gly Tyr Lys Phe Cys Asn Tyr Ile Ser Tyr Pro Ser Asn Lys	1665	1670	1675
Ser Asn His Leu Ser Asn Glu Lys Ser Asn Phe Ser Ser Tyr Asn Asn	1685	1690	1695
Leu Ser Ser Tyr Asn Asn Phe Ser Ser His His Asn Leu Ser Ser His	1700	1705	1710
His Asn Leu Ser Ser His His Asn Leu Ser Ser His His Asn Leu Ser	1715	1720	1725
Ser His His Asn Leu Ser Ser His His Asn Leu Ser Ser His Asn Asn	1730	1735	1740
Leu Ser Ser His His Asn Leu Ser Ser His Asn Asn Leu Ser Ser His	1745	1750	1755
Asn Asn Leu Ser Ser Tyr Asn Leu Cys Ser Ser Pro Tyr Thr Asp Lys	1765	1770	1775
Ile Lys Cys Leu Arg Phe Leu Gln Ile Lys Glu Phe Phe Phe Leu His	1780	1785	1790
Asn Ile Asp Lys Asn Asn Thr Leu Phe Phe Leu Lys Asp Tyr Thr Asp	1795	1800	1805
Tyr Ile Asp Arg Tyr Leu Gln Asp Phe Ser Ser Leu Tyr Phe Tyr His	1810	1815	1820
Tyr Tyr Pro Cys Thr Asn Ile Asn Leu Asn Phe Leu Tyr Ala Asn Leu	1825	1830	1835
Phe Asn Val Asn Pro Leu Gln Gly Glu Val Asp Asp Leu Arg Trp Asn	1845	1850	1855
Tyr Leu Leu Tyr Ser Pro Tyr Glu Leu Phe Thr Asn Ser Arg Lys Arg	1860	1865	1870
Leu Gln Cys Tyr Ile Leu Lys Ile Leu Ile Glu Gln Phe Gln Asn Asp	1875	1880	1885
Phe Glu Ile Leu Lys Glu Glu Lys Asn His Cys Leu Lys Glu Ile Asn	1890	1895	1900
Phe Leu Ile Asn Lys Leu Lys Ser Ser Leu Gln Asp Val Glu Lys Tyr	1905	1910	1915
Met Ser Tyr Asn Phe Ser Tyr Tyr Met Asn Met Lys Leu Phe Ile Lys	1925	1930	1935
Asn Gln Pro Trp Tyr Asp Lys Gly Arg Ile Tyr Asn Ile Pro Asp Ala	1940	1945	1950
Ile Lys Lys Asp Leu Leu Leu Lys Ile Gln Leu Asn Lys Leu Asn Met	1955	1960	1965

Glu Thr Lys Lys Asp Ile Asn Lys Glu Asn Tyr Ile Leu Gln Thr Lys  
 1970 1975 1980

Tyr Asn Glu Gln Lys Glu Asn Ile Asn Val Asp Thr Ser Thr Gln Tyr  
 1985 1990 1995 2000

Tyr Asn Leu Lys His Asp Met Lys Asn Thr Pro Ser Thr  
 2005 2010

<210> 123

<211> 154

<212> PRT

<213> Plasmodium falciparum

<400> 123

Met Thr Phe Leu Ser Ser Pro Ser Thr Asn His Met Ile Thr Asn Leu  
 1 5 10 15

Thr Lys Arg Thr Asn Glu Phe Gln Ser Lys Ile Asp Gly Met Leu Asn  
 20 25 30

Asn Ile Ser Thr Glu Ser Leu Pro Phe Gln Lys Lys Ser Phe Met Cys  
 35 40 45

Cys Val Asn Cys Phe Asp Thr Tyr Asn Thr Asp Phe Glu Thr Ile Gly  
 50 55 60

Lys Cys Val Asn Asn Cys Gln Lys Gly Thr Glu His Phe Val Gln Val  
 65 70 75 80

Val Gln Asn Glu Met Gln Asn Leu Gln Asn Asn Leu Gln Ser Cys Gln  
 85 90 95

Gln Ser Cys Phe Tyr Lys Tyr Ser Pro Asn Tyr Ala Lys Ser Asn Ser  
 100 105 110

Asn Ile Asp Gly Pro Thr Ile Glu Lys Glu Met Glu Thr Cys Val Val  
 115 120 125

Lys Cys Phe Asp Lys His Glu Pro Met Leu Pro Glu Ile Ser Asp Arg  
 130 135 140

Leu His Lys Thr Leu Lys Glu Glu Met Lys  
 145 150

<210> 124

<211> 669

<212> PRT

<213> Plasmodium falciparum

<400> 124

Met Met Glu Asn Lys Val Cys Asn Tyr Ser Leu Arg Ser Arg Ile Glu  
 1 5 10 15

Ser Ile Phe Lys Gly Tyr Asn Asn Met Ile Asn Ser Asn Glu Glu Leu  
 20 25 30

Ile Gln Asn Ser Asp Val Glu Arg Asp Cys Asn Thr Glu Thr Cys Leu  
 35 40 45

Asn Lys Glu Lys Tyr Met Asn Lys Asn Glu Glu Cys Ile Arg Ile Lys  
 50 55 60

Arg Lys Ile Ser Asn Asp Asp Asn Met Ser Ile Phe Ile Lys Gly Arg  
 65 70 75 80

Lys Tyr Leu Phe Ile Glu Asn Tyr Thr Ser Val Ile Tyr Glu Lys Cys

85								90				95			
Glu	Asp	Lys	Leu	Asn	Ile	Ile	Leu	Ala	Asn	Lys	Tyr	Leu	Glu	Gln	Gly
			100					105				110			
Ile	Ile	Glu	Val	Gln	Leu	Lys	Gly	Asn	Val	Thr	Phe	Ile	Ile	Pro	Cys
		115					120					125			
Cys	Leu	Asn	Lys	Asn	Ile	Leu	Ser	Cys	Phe	Leu	Pro	Gln	Leu	Glu	Arg
	130					135					140				
Gly	Leu	Tyr	His	Leu	Phe	Phe	Phe	Phe	Asn	Lys	Glu	Arg	Met	Phe	Ile
145					150					155					160
Lys	Leu	Leu	Arg	Pro	Gly	Ser	Glu	Leu	Ser	Asp	Asp	Ile	Lys	Ser	Ile
				165					170					175	
Pro	Leu	His	Val	Ile	Glu	Ile	Thr	Asp	Phe	Ser	His	Gly	Leu	Lys	Lys
			180					185					190		
Asn	Lys	Ile	Thr	Asp	Lys	Asn	Lys	Glu	Tyr	Ile	Ile	Asn	Ser	Thr	His
		195					200					205			
Asn	Asn	Phe	Tyr	Thr	Asn	Lys	Glu	Leu	Ile	Lys	Leu	Tyr	Asn	Asn	Ile
	210					215					220				
Tyr	Asn	Asn	Tyr	Asn	Asn	Ile	Tyr	Asn	Asp	Glu	Tyr	Lys	Lys	Asn	Asn
225					230					235					240
Lys	Ile	Ser	Leu	Gln	Lys	Asn	Phe	Tyr	Leu	His	Tyr	Asn	Asn	Glu	Glu
				245					250					255	
His	Phe	Tyr	Asn	Phe	Leu	Asn	Ser	Tyr	Lys	Asp	Gln	Phe	Ile	Asp	His
			260						265				270		
Ser	Ser	Phe	Thr	Thr	Lys	Met	Arg	Asn	Ser	Tyr	Gln	His	Asn	Lys	Asp
		275					280					285			
Ile	Glu	Arg	Glu	Lys	Arg	Glu	Lys	Asn	Gln	Lys	Asn	Ser	Leu	Asp	Ile
	290					295					300				
Asn	Asn	Met	Asn	Phe	Ile	Ser	Gln	Leu	Asn	Leu	Glu	Lys	His	Val	Ala
305					310					315					320
Gln	Ser	Arg	Ile	Pro	Ile	Leu	Tyr	Lys	Arg	Leu	Leu	Tyr	Asp	Asn	Cys
				325					330					335	
Ile	Tyr	Glu	Asn	Lys	Met	Val	Ile	Met	His	Phe	His	Thr	Lys	Ile	Phe
			340					345					350		
Glu	Tyr	Asn	Pro	Phe	Asn	Ile	Leu	Ser	Thr	His	Ile	Phe	Thr	Lys	Ser
		355					360					365			
Glu	Ile	Glu	Lys	Asp	Gly	Tyr	Ile	Ile	Phe	Ala	Phe	Asn	Ile	Ile	Pro
	370					375				380					
Ile	Thr	Ile	Asn	Thr	Asn	Lys	Asn	Lys	Ser	Lys	Tyr	Ile	Asn	Ser	Tyr
385					390					395					400
His	Asn	Glu	Asp	Ile	Tyr	Lys	Lys	Lys	Asn	Ile	Asn	Lys	Lys	Ile	Asn
				405					410					415	
Tyr	Ser	Ser	Asn	Ile	Leu	Asn	Ser	Ser	Gly	Glu	Lys	Lys	Glu	Glu	Ile
			420					425					430		
Gly	Asn	Ser	Tyr	Met	Ser	Thr	Leu	Phe	Ile	Leu	Asn	Ser	Asp	Glu	Arg
		435					440					445			
Asn	Cys	Val	Asp	Ile	Arg	Leu	Trp	Lys	Tyr	Ile	Lys	Thr	Val	Glu	Cys
	450					455					460				

Asn Lys Asn Asp Ile Ser Asn Asn Phe Tyr Leu Ser Lys Asn Asn Tyr  
 465 470 475 480  
 Lys Asn Val Val Cys Pro Ile Ser Pro Gln Leu Ile Asn Asn Lys Asn  
 485 490 495  
 Ile Phe Asn Arg Tyr Ser Glu Gly Leu Lys Ile Ser Asp Lys Val Ser  
 500 505 510  
 Ile Phe Phe Glu Asp Trp Asn Glu Asp Ile Leu Pro Val Gln Lys Phe  
 515 520 525  
 Val Asn Ser Phe Glu Tyr Asp Ile Pro Tyr Lys Lys Leu Asn Glu Leu  
 530 535 540  
 Ser Asn Tyr Val Glu Asp Ile Asn Gly Asp Ile Leu Leu Tyr Asn Asp  
 545 550 555 560  
 Phe Asn Glu Asn Asp Lys Asn Asp His Val Cys Asp Asp Thr Ile Lys  
 565 570 575  
 Ser Gln Asn Glu Ser Ile Asn Gly Tyr Gln Tyr Asn Asn Asn Glu Ser  
 580 585 590  
 Glu Leu Ile Thr Asn Thr Ser Met Asn Gln Asn Asn Phe Tyr Ile Lys  
 595 600 605  
 Asp Met Glu Lys Asn Lys Ile Asn Asn Lys Asp Lys Met Asn Lys Ile  
 610 615 620  
 Ser Met Lys Tyr Leu Phe Asn Asn Phe Val Ser Phe Val Leu Ile Ile  
 625 630 635 640  
 Asp Glu Lys Ile Tyr His Ser Val Thr Pro Ile Asn Lys Phe Ile Leu  
 645 650 655  
 Leu Phe Ile Ile Asn Tyr Trp Met Asn Phe Val Glu Lys  
 660 665

&lt;210&gt; 125

&lt;211&gt; 1166

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 125

Met Ser Glu Glu Ser Ala Lys Ser Leu Tyr Glu Lys Glu Lys Lys Ile  
 1 5 10 15  
 Gln Ala Leu Ser Lys Ile Tyr His Ile Lys Phe Glu Thr Leu Leu Ile  
 20 25 30  
 Tyr Ile Ile Ile Pro Lys Thr Thr Thr Lys Ser Leu Cys Tyr Lys Asp  
 35 40 45  
 Phe Phe Asp Asp Leu Ile Glu Ile Lys Lys Tyr Ile Asn Ile Glu Glu  
 50 55 60  
 Asn Asp Glu Cys Val Lys Thr His Val Lys Val Asn Glu Glu Ile Gln  
 65 70 75 80  
 Gln Arg Lys Thr Asn His Asp Asn Ile Asn Asn Asn Asp Val Asn Asp  
 85 90 95  
 Asp Asn Ile Asn Asn Asn Pro Ile Asn Asp Asp Asn Ile Ser Asn Asn  
 100 105 110  
 His Ile Asp Asp Asp Asn Ile Asn Asn Asn His Ile Asn Asp Asp Asn  
 115 120 125

Ile Asn Asn Asn Asp Val Asn Asp Asp Asn Ile Asn Asn Asn His Leu  
 130 135 140  
 Asn Asp Asp Asn Ile Asn Asn Asn His Ile Asn Asp Asp Asn Ile Asn  
 145 150 155 160  
 Asn Asn His Ile Asn Asp Asp Asn Ile Asn Asn Asn His Ile Asn Asp  
 165 170 175  
 Asp Asn Ile Asn Asn Asn Tyr Cys Asn Asn Asp Val Tyr Asp Asn Ile  
 180 185 190  
 Ser Asn Val His Ile Ile Cys Asn Asn Ser Pro Lys Lys Glu Lys Glu  
 195 200 205  
 Lys Glu Asn Val Glu Tyr Gln Glu Ile Gln Gly Asp Lys Asn Ile Phe  
 210 215 220  
 Ile Lys Asn Leu Leu Val Phe Ile Asn Asn Leu Ile Ile Leu Tyr Phe  
 225 230 235 240  
 Ser Lys Ser Asp Leu Ile Asp Val Cys Ile Asn Arg Arg Ser Tyr Asn  
 245 250 255  
 Lys Cys Gly Phe Tyr Ala Cys Asp Asn Thr Phe Leu Asn Asn Ile Asn  
 260 265 270  
 Arg Ser Lys Tyr Lys Ile Asp Thr Lys Ser Lys Arg Ile Tyr Leu Arg  
 275 280 285  
 Glu Tyr Tyr Asp Leu Phe Cys Ser Thr Asn Cys Met Asn Tyr Asn Leu  
 290 295 300  
 Gly Leu Leu Lys Leu Ile Asn Gln Asn Asn Lys Asn Asn Thr Glu Glu  
 305 310 315 320  
 Ile Asn Tyr Lys Lys Lys Ser Gln Leu Ile His Ile Met Phe Leu Thr  
 325 330 335  
 Phe Phe Pro Phe Phe Lys Leu Tyr Asn Leu Thr Asp Leu Leu Asn Asn  
 340 345 350  
 Ile Asn Lys Tyr Asp Ile Gln Cys Asn Lys Ile Cys Lys Ile Gln Thr  
 355 360 365  
 Asn Ile Asn Thr Gln Ser Ile Asp Leu Gln Gln Thr Asp Asn Asn Ile  
 370 375 380  
 Ile Lys Met Asn Lys Thr Asn Glu Arg Lys Glu Thr Lys Lys Lys Lys  
 385 390 395 400  
 Ile Tyr Asn His Val Thr Asn Ile Lys Ile Lys Glu His Tyr His Asp  
 405 410 415  
 Lys Lys Gln Val Phe Ile Gln Glu Asn Ser Lys Asp Thr Ser Tyr Ile  
 420 425 430  
 Val Lys Lys Lys Asp Lys Ser Lys Tyr Ile Leu Ile Asn Asn Lys Asn  
 435 440 445  
 Asn Asn Met Glu His Lys Lys Ser Ile Leu Lys Asn Lys Lys Asp Asn  
 450 455 460  
 Gln Glu Asn Thr Gln Lys Thr Asn Ser Lys Asn Val Ser Phe Asn Gln  
 465 470 475 480  
 Asn Ile Lys Leu Tyr Gln Tyr Asn Lys Asp Asp His Val Asp Ser Tyr  
 485 490 495

Ser Ile His Asp Thr Ser Val Asp Leu Gln Asn Lys Asp Glu Arg Lys  
 500 505 510  
 Ile Lys Lys Asn Phe Lys Glu Thr Thr Lys Arg Lys Lys Lys Phe  
 515 520 525  
 Tyr Met Glu Asn Lys Phe Asn Pro Phe Asn Ile Glu Asp Tyr Lys Tyr  
 530 535 540  
 Thr Asn Phe His Ile Asn Tyr Asn Ser Ile Lys Glu Leu Lys Glu Pro  
 545 550 555 560  
 Phe Glu Arg Tyr Ile Asp Asn Asp Lys Lys Tyr Glu Glu His Asn Ile  
 565 570 575  
 Gln Ile Glu Asp Lys Leu Ile Lys Ser Cys Asn Ile Ile Asn Asn Asn  
 580 585 590  
 Asn Glu Ser Val Leu Asn Lys Cys Ala His Val Leu Asn Leu Leu Ser  
 595 600 605  
 Ala Asp Glu His Arg Gly Lys Lys Glu Glu Lys Cys Val Thr Lys Ile  
 610 615 620  
 Ile Glu Glu Ile Lys Asn Glu Glu Met Glu Pro Asn Gln Glu Met Gln  
 625 630 635 640  
 Gln Asp Lys Asp Asn Glu Leu Lys Glu Lys Asn Asp Lys Glu Glu Lys  
 645 650 655  
 Asn Asp Gln Glu Glu Lys Asn Asp Gln Glu Glu Lys Asn Asp Lys Glu  
 660 665 670  
 Glu Lys Asn Asp Lys Glu Glu Lys Asn Asp Gln Glu Lys Lys Asn Asp  
 675 680 685  
 Gln Glu Glu Lys Asn Asn Val His Ile Asp Lys Gln Glu Lys Ile Asn  
 690 695 700  
 Glu Asn Val Glu Lys Thr Leu Asn Leu Tyr Gln Lys Tyr Ser Leu Tyr  
 705 710 715 720  
 Asn Leu Tyr Asp Leu Ser Lys Leu Asp Glu Ser Lys Val Val Asp Phe  
 725 730 735  
 Phe Tyr Asp Asn Glu Lys Glu Asn Phe Ile Asn Phe Ala Ser Gln Lys  
 740 745 750  
 Met Asn Glu Ile Asn Arg Lys His Asn Asp Ala Glu Arg Gly Arg Lys  
 755 760 765  
 Ile Arg Leu Leu Asn Ser Ser Thr Asp His Lys Arg Lys Asp Asn Lys  
 770 775 780  
 Ile Asn Gln Lys Lys Asn Asp Glu Asn Ser Thr Tyr Gly Glu Asn Ser  
 785 790 795 800  
 Thr Tyr Gly Glu Asn Ser Thr His Gly Glu Asn Ser Thr His Gly Glu  
 805 810 815  
 Asn Ser Thr His Gly Glu Asn Ser Thr His Gly Glu Asn Ser Thr His  
 820 825 830  
 Gly Glu Asn Ser Thr Tyr Gly Glu Asn Gly Thr Tyr Asp Glu Asn Ser  
 835 840 845  
 Thr Tyr Asp Glu Asn Cys Thr Tyr Asp Lys Asn Arg Thr Tyr Asp Glu  
 850 855 860  
 Asn Arg Thr Tyr Asp Glu Asn Arg Thr Tyr Asp Lys Asn Arg Thr Tyr

865	870	875	880
Asp Glu Asn Arg Thr Tyr Asp Glu Asn Arg Thr Tyr Asp Asp Lys Ser			
885		890	895
Cys Val His Phe Lys Asp Asp Ile Ile Ile Asn Glu Glu Glu Cys Glu			
900		905	910
Lys Thr Lys Glu Ala Asp His Arg Val Asn Glu Asp Thr Asp Asp Ile			
915		920	925
Lys Leu Gln Ala Leu Leu Leu Glu Lys Lys Glu Lys Ile Arg Glu Glu			
930		935	940
Tyr Ile Gln Thr Phe Lys Ser Asp Ile Ser Ile Asn Met Lys Leu Gln			
945		950	955
Asp Asn Asp Lys His Glu Tyr Glu Asn Phe Asn His Leu Glu Asp Asp			
965		970	975
Glu Ser Thr Tyr Asp Asp Leu Ser Tyr Asp His Phe Thr Asp Asp Glu			
980		985	990
Leu Glu Asn Lys Asn Cys Phe Ser Asn Asn Val Val Lys Met Asn Glu			
995		1000	1005
Asn Lys Tyr Ile Tyr Gly Arg Asn Asn Gly Leu Val Tyr Glu Asn Leu			
1010		1015	1020
Ser Leu Tyr Val Val Leu Trp Asp Ile Phe Thr Asn Asn Ile Ser Lys			
1025		1030	1035
Tyr Thr Val His Phe Phe Glu Lys Asn Glu Phe Ile Val Pro Lys Ala			
1045		1050	1055
Ile Asn Glu Glu Glu Arg Lys Arg Arg Asn Glu Phe Ile Tyr Asn Ile			
1060		1065	1070
Ser Gln Asn Met Pro Ile Tyr Ile Asn Cys Ile Ser Ser Ile Ile Val			
1075		1080	1085
Asn Ile Cys Arg Thr Phe Leu Phe His Lys Pro Leu Ile Pro Phe Lys			
1090		1095	1100
Lys Val Ile Tyr Lys Ser Ile Ile Cys Val Ile Ala Met Ala Ile Lys			
1105		1110	1115
Leu His Lys Pro His Leu Ile Pro Ser Ser Glu Met Leu Asn Ile Lys			
1125		1130	1135
Lys Ala Glu Asp Tyr Leu Ile Ile Glu Asn Lys Ile Asp Gln Glu Glu			
1140		1145	1150
Leu Asn Glu Leu Cys Val Leu Phe Phe Gln Asn Asn Phe Tyr			
1155		1160	1165

&lt;210&gt; 126

&lt;211&gt; 540

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 126

Met Val Leu Tyr Cys Val Asn Ser Ile Leu Lys Asp Gly Tyr Arg Ile
1 5 10 15

Met Lys Asn Asn Glu Asp Thr Ile Leu Lys Asn Ile Glu Ala Cys Lys
20 25 30

Glu Ile Cys Asn Ile Leu Gln Thr Ser Leu Gly Pro Lys Cys Met Asn
---



35					40					45					
Lys	Leu	Ile	Ile	Asn	His	Ile	His	Lys	Lys	Ile	Val	Ser	Ser	Asp	Cys
50						55					60				
Ile	Thr	Ile	Leu	Asn	Asp	Met	Glu	Ile	Asn	His	Pro	Val	Val	Asn	Ile
65					70					75					80
Leu	Lys	Lys	Leu	Ser	Glu	Thr	Ile	Asn	Tyr	Glu	Tyr	Gly	Asp	Phe	Thr
				85					90					95	
Asn	Tyr	Ala	Phe	Thr	Ile	Thr	Cys	Glu	Ile	Leu	Asp	Lys	Ala	Ser	Phe
			100					105					110		
Leu	Ile	Gln	Gln	Gly	Phe	Asn	Ile	Asn	Asp	Ile	Leu	Asn	Gly	Phe	Val
		115					120					125			
Leu	Gly	Tyr	Lys	Glu	Ile	Glu	Lys	Val	Leu	Glu	Glu	Met	Ile	Val	Trp
	130					135					140				
Lys	Val	Pro	Asn	Phe	Tyr	Glu	Glu	Lys	Glu	Leu	Ile	Lys	Val	Leu	Lys
145					150					155					160
Ser	Val	Met	Leu	Thr	Lys	Asn	Ile	Ser	Asn	Asn	Tyr	Asn	Phe	Leu	Ile
				165					170					175	
Gln	Leu	Leu	Ala	Lys	Cys	Ile	Ser	Thr	Leu	Met	Pro	Glu	Lys	Ile	Glu
			180					185					190		
Asp	Phe	Asp	Val	Asp	Asn	Ile	Arg	Val	Ser	Lys	Leu	Asn	Gly	Gly	Asn
		195					200					205			
Ile	Ile	Asp	Ser	Glu	Phe	Leu	Met	Gly	Met	Val	Ile	Ala	Arg	Glu	Ala
	210					215					220				
Asn	Gly	Ile	Ile	Lys	Lys	Lys	Glu	Asn	Ala	Asn	Val	Ile	Val	Leu	Asn
225					230					235					240
Cys	Gly	Leu	Glu	Gly	Pro	Thr	Thr	Glu	Thr	Lys	Gly	Thr	Val	Leu	Leu
				245					250					255	
His	Asn	Ala	Glu	Glu	Leu	Ile	Asn	Tyr	Thr	Lys	Gly	Glu	Glu	Leu	Gln
			260					265					270		
Met	Lys	Lys	Tyr	Ile	Asp	Asn	Phe	Lys	Lys	Ala	Asn	Val	Asp	Val	Ile
		275					280					285			
Ile	Val	Asn	Gly	Ala	Ile	Ser	Asp	Ile	Ala	Gln	His	Phe	Cys	Asp	Thr
	290					295					300				
Asn	Asn	Ile	Met	Thr	Leu	Lys	Ile	Thr	Ser	Lys	Phe	Glu	Thr	Leu	Arg
305					310					315					320
Ile	Cys	Lys	Leu	Leu	Asn	Ile	Ser	Ser	Leu	Ile	Lys	Leu	Ser	Thr	Pro
				325					330					335	
Gln	Pro	Glu	Asp	Ile	Gly	Lys	Val	Ser	Ser	Ile	Tyr	Val	Ser	Glu	Ile
			340					345					350		
Ala	Ser	Lys	Lys	Val	Thr	Ile	Ile	Asn	Ser	Lys	Asn	Lys	Lys	Val	Gly
		355					360					365			
Thr	Ile	Ile	Leu	Arg	Gly	Ala	Thr	Phe	Asn	Leu	Leu	Asp	Glu	Val	Glu
	370					375					380				
Arg	Cys	Ile	His	Asp	Gly	Ile	Asn	Ser	Ile	Lys	Asn	Ala	Ile	Lys	Gly
385					390					395					400
Asn	Ala	Phe	Leu	His	Gly	Gly	Gly	Cys	Val	Glu	Ile	Gln	Leu	Cys	Leu
				405					410					415	

Ala Leu Lys Lys Tyr Ala Asn Gln Leu Lys Gly Val Asp Asn Tyr Cys  
 420 425 430  
 Val Lys Ile Phe Ala Glu Ala Phe Tyr Ile Ile Pro Lys Ile Leu Ala  
 435 440 445  
 Arg Asn Ala Gly Tyr Asn Thr Thr Asp Val Leu Asn Glu Leu Ile Asn  
 450 455 460  
 Glu His Asn Lys Gly Asn Thr His Ser Cys Ile Asn Ile Asn Lys Asp  
 465 470 475 480  
 Ser His Ile Thr Ser Ala Gln Asn Asn His Ile Tyr Asp Asn Tyr Asn  
 485 490 495  
 Cys Lys Lys Tyr Ala Ile His Leu Ala Met Glu Ala Val Gln Thr Ile  
 500 505 510  
 Leu Lys Ile Asp Gln Ile Ile Met Ser Lys Pro Ala Gly Gly Pro Lys  
 515 520 525  
 Pro Arg Asp Lys Asn Pro Asp Tyr Asp Glu Ala Phe  
 530 535 540

<210> 127  
 <211> 1438  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 127  
 Met Ala Leu Lys Ser Ile Asn Ile Ser Gly Asn Phe Glu Trp Cys Pro  
 1 5 10 15  
 Phe Glu Glu Tyr Lys Asn Tyr Leu Leu Cys Phe Asn Ser His Asn Leu  
 20 25 30  
 Leu Tyr Ser Asn Asn Asn Ser Leu Asn Asn Tyr Ile Tyr Leu Leu Asp  
 35 40 45  
 Ile Asn Leu Asn Ser Glu Ile Arg Asn Leu Glu Ile Val Asn Lys Tyr  
 50 55 60  
 Asn Phe Glu Asp Ala Leu Lys Tyr Asp Asn Asp Val Ile Lys Gly Gly  
 65 70 75 80  
 Asn Lys Lys Asn Asn Lys Asn Asn Lys Asn Asn His Asn Asn Asn Ser  
 85 90 95  
 Val Asn Glu Tyr Val Thr Cys Phe Glu Trp Met Asn Ser Asn Asn Phe  
 100 105 110  
 Val Asp Ile Asn Asn Asn Glu Glu Leu Ser Lys Gly Ile Ile Val Gly  
 115 120 125  
 Gly Leu Thr Asn Gly Asp Ile Val Leu Leu Asn Ala Lys Asn Leu Phe  
 130 135 140  
 Glu Thr Asn Arg Asn Tyr Asp Asn Phe Ile Leu Ser Lys Thr Asn Ile  
 145 150 155 160  
 His Asp Asn Gly Ile Asn Cys Leu Glu Tyr Asn Arg His Lys Asn Asn  
 165 170 175  
 Leu Ile Ala Thr Gly Gly Asn Asp Gly Gln Leu Phe Ile Thr Asp Ile  
 180 185 190  
 Glu Asn Leu Tyr Ser Pro Thr Ser Tyr Asp Pro Tyr Leu Asp Lys Asn  
 195 200 205

Asn Leu Gln Lys Ile Thr Cys Leu Asn Trp Asn Lys Lys Val Ser His  
 210 215 220  
 Ile Leu Ala Thr Ser Ser Asn Asn Gly Asn Thr Val Ile Trp Asp Leu  
 225 230 235 240  
 Lys Ile Lys Lys Ser Ala Val Ser Phe Arg Asp Pro His Ser Arg Thr  
 245 250 255  
 Lys Thr Ser Ser Leu Ser Trp Leu Ser Asn Gln Pro Thr Gln Val Leu  
 260 265 270  
 Ile Ser Tyr Asp Asp Asp Lys Asn Pro Cys Leu Gln Leu Trp Asp Leu  
 275 280 285  
 Arg Asn Ser Asn Tyr Pro Ile Lys Glu Ile Ile Gly His Ser Lys Gly  
 290 295 300  
 Ile Asn Asn Ile Cys Phe Ser Pro Ile Asp Thr Asn Leu Leu Leu Ser  
 305 310 315 320  
 Ser Gly Lys Asp Val Thr Lys Cys Trp Tyr Leu Asp Asn Asn Asn Phe  
 325 330 335  
 Asp Ile Phe Asn Glu Ile Asn Asn Ser Ala Asn Asn Ile Tyr Ser Lys  
 340 345 350  
 Trp Ser Pro Tyr Ile Pro Asp Leu Phe Ala Ser Ser Thr Asn Met Asp  
 355 360 365  
 Thr Ile Gln Ile Asn Ser Ile Asn Asn Gly Asn Lys Met Thr Ser Lys  
 370 375 380  
 Tyr Ile Pro Thr Phe Tyr Lys Lys Glu Ala Gly Ile Cys Ile Gly Phe  
 385 390 395 400  
 Gly Gly Lys Ile Cys Thr Phe Asp Asn Ser Thr Asn Asn Met Ser Asn  
 405 410 415  
 Val Asn Asn Met Asn Asn Val Asn Asn Met Asn Asn Ile Asn Ser Phe  
 420 425 430  
 Asn Asn Asp Asn Ser Cys Asp Gly Glu Tyr Asp Ser Asn Lys Gly Lys  
 435 440 445  
 Asn Lys Ser Thr Gln Lys Lys Phe Leu Ile Lys Tyr His Ile Tyr Pro  
 450 455 460  
 Thr Asp Met Glu Leu Ile Ser Glu Ala Asp Asn Phe Glu Lys Tyr Ile  
 465 470 475 480  
 Thr Ser Gly Asn Tyr Lys Glu Phe Cys Glu Ser Lys Ile Asn Lys Cys  
 485 490 495  
 Asp Asp Asp His Glu Lys Leu Thr Trp Gln Ile Leu Gln Leu Leu Cys  
 500 505 510  
 Thr Ser Gln Arg Gly Asp Ile Val Lys Tyr Leu Gly His Asp Ile Asn  
 515 520 525  
 Asn Ile Val Asp Lys Ile Met Gln Thr Ile Gly Lys Gln Pro Gly Phe  
 530 535 540  
 Ile Phe Lys Thr Leu Ile Asp Glu Lys Glu Asn Asn Asn Asn Asn Asn  
 545 550 555 560  
 Asn Asn Asn Ser Thr Asn Gln Met Tyr Gln Asn Asp Val Leu Leu His  
 565 570 575

Asn Asp Pro Asn Leu Met Asn Asn Tyr Leu Leu Lys Asp Asn Met Asn  
 580 585 590

Pro Asn Ile Met Leu Asn Asn Asn Asn Asn Ile Asn Asn Arg Thr  
 595 600 605

Gly Thr Asn Val Met Tyr Ser Asn Gly Gln Asn Leu Leu Gly Asp Thr  
 610 615 620

Asn His Asn Glu Glu Asn Phe Asn Gly Asn Phe Asp Ile Asp Pro Glu  
 625 630 635 640

Lys Phe Phe Arg Glu Leu Gly Glu Lys Thr Glu Asn Glu Lys Ile Lys  
 645 650 655

Gln Asn Glu Glu Asp Ile Ser Gly Asn Asp Glu His Leu Leu Asn Ser  
 660 665 670

Ser Ile Lys Gly Lys Glu Asn Lys Thr Lys Asn Lys Lys Ser Gly Leu  
 675 680 685

Gly Thr Asp Asp Asn Asn Asp Asn Gly Asp His Asn Lys Asn Glu Gly  
 690 695 700

Ser Asn Ile Asn Gly Glu His Val Ser Glu His Ile Leu Asn Glu Lys  
 705 710 715 720

Asn Asn Thr Asn Asn Trp Asn Leu Gly Ile Glu Ala Ile Ile Lys Glu  
 725 730 735

Cys Val Leu Ile Gly Asn Ile Glu Thr Ala Val Glu Leu Cys Leu His  
 740 745 750

Lys Asn Arg Met Ala Asp Ala Leu Leu Leu Ser Ser Phe Gly Gly Glu  
 755 760 765

Gln Leu Trp His Lys Thr Lys Thr Ile Tyr Ile Lys Lys Gln Asn Asp  
 770 775 780

Asn Phe Leu Lys Asn Ile Asn Tyr Val Leu Asp Asp Lys Leu Glu Asn  
 785 790 795 800

Leu Ile Asn Asn Val Asp Leu Asn Ser Trp Glu Glu Ala Leu Ser Ile  
 805 810 815

Leu Cys Thr Tyr Ala Ile Asn Asn Pro Asn Phe Asn Ser Leu Cys Glu  
 820 825 830

Met Leu Ala Lys Arg Leu Gln Asn Glu Lys Phe Asp Ile Arg Ala Ala  
 835 840 845

Ser Ile Cys Tyr Leu Cys Ala Cys Asn Phe Ser Glu Thr Val Glu Ile  
 850 855 860

Trp Asn Asn Met Pro Ser Lys Lys Thr Ser Leu Leu Asn Val Leu Gln  
 865 870 875 880

Asp Ile Val Glu Lys Met Thr Ile Leu Lys Met Ile Ile Lys Tyr Glu  
 885 890 895

Asn Phe Asn Ser Ile Met Asn Gln Lys Ile Ser Gln Tyr Ala Glu Leu  
 900 905 910

Leu Ala Asn Ser Gly Arg Leu Lys Ala Ala Met Thr Phe Leu Cys Leu  
 915 920 925

Ile Gln His Asp Gln Ser Ile Glu Ser Leu Ile Leu Arg Asp Arg Ile  
 930 935 940

Tyr Asn Ser Ala Asn His Val Leu Cys Gln Gln Ile Lys Pro Pro Ile

945	950	955	960
Ser Pro Phe Gln Ile Val Asp Ile Lys Pro Ser Pro Asn Val Tyr Gln 965 970 975			
Asn Asn Met Tyr Asn Asn Asn Asn Asn Asn Asn Ile Asn Ile Asn 980 985 990			
Ser Ser Ser Asn Asn Asn Asn Asn Asn Asn Asn Lys Val Leu Ser 995 1000 1005			
Ser Met His His Pro Met Gln Gln Phe Asn Gln Cys Asn Val Asn Lys 1010 1015 1020			
Met Tyr Thr Ser Thr Ser Asn Ile Ile Asn Asn Asn Thr Met Asn Ser 1025 1030 1035 1040			
Asn Phe Lys Ser Val Ile Pro Pro Pro Leu Pro Met Asn Thr Gln Met 1045 1050 1055			
Asn Asn Ser Thr Ser Ser Ile Gln Pro Pro Pro Ser Val Pro Pro Thr 1060 1065 1070			
Lys Phe His Thr Gln Ile Ile Asn Asn Thr Met Asn Ser Arg Ser Ser 1075 1080 1085			
Ile Ala Thr Thr Thr Lys Asn Tyr Pro Thr Ser Asn Leu Asn Ser Val 1090 1095 1100			
Ile Pro Thr Ser Met Asn Asn Met Asn Thr Asn Ile Ser His Gly Asn 1105 1110 1115 1120			
Asn Val Thr Pro Pro Tyr Met Ser Gln Thr Asn Val Ala Val Pro Asn 1125 1130 1135			
Met Asn Asn Asn Asn Asn Asn Asn Asn Thr Met Asn Pro Thr Tyr Pro 1140 1145 1150			
Ser Leu Pro Lys Phe Pro Asn Tyr Asn Leu Asn Ser Gln Val Gln Gln 1155 1160 1165			
Asn Ser Ile Ile Pro Glu Lys Gln Leu Thr Ser Pro Met Phe Ser Ser 1170 1175 1180			
Asn Ser Tyr Gly Asn Ile Asn Lys Thr His Thr Thr Asn Asn Ala Val 1185 1190 1195 1200			
Pro Pro Pro Pro Asn Val Thr Ser Ser Val Val Thr Pro Pro Met Pro 1205 1210 1215			
Ser Asn Gln Leu Asn Asn Thr Arg Ser Ser Phe Ala Asp Ile Gln Asn 1220 1225 1230			
Val Val Ser Pro Pro Arg Asn Lys Asn Gln Ser Ile Ser Ser Thr Ala 1235 1240 1245			
Asn Leu Asn Tyr Gln His Asp Asn Gln Phe Asn Lys Arg Glu Cys Met 1250 1255 1260			
Glu Gln Pro Val Tyr Pro Met Thr Asn Gln Ser Ser Met Phe Ser Met 1265 1270 1275 1280			
Asn Asn Thr Met Gln Lys Lys Asn Val Pro Gly Gly Phe Gln Asp Asn 1285 1290 1295			
Thr Ser Gln Met Asn Tyr Gly Met Gln Pro Thr Gly Ser Pro Pro Pro 1300 1305 1310			
Ser Ser Ile Lys Leu Ile Ser Ile Tyr Leu Gly Ser Thr Thr Gln Ser 1315 1320 1325			

Thr Ala Asn Glu Asn Lys Lys Ile Gln Thr Ala Thr Lys Glu Gln Asn  
 1330 1335 1340  
 Gly Val Leu Met Asn Arg Asn His Ile Glu Asn Ile Lys Lys Thr Ile  
 1345 1350 1355 1360  
 Ser Asn Leu Leu Asn Ile Tyr Thr Ser Gln Glu Ser Val Lys Lys Lys  
 1365 1370 1375  
 Ala Asp Asp Val Ser Ser Lys Val Tyr Glu Leu Phe Glu Lys Leu Asp  
 1380 1385 1390  
 Cys Gly Ala Phe Asn Glu Gln Ile Asn Asp Ser Leu Leu Asn Leu Val  
 1395 1400 1405  
 Asn Cys Ile Asn Ala Asn Asp Phe Lys Thr Thr Asn Lys Ile Ile Val  
 1410 1415 1420  
 Asp Leu Ser Arg Asn Leu Trp Asp Gly Ser Asn Lys Ala Trp  
 1425 1430 1435

<210> 128  
 <211> 173  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 128  
 Met Pro Lys Val Asp Ile Phe Ser Glu Glu His Ile Ser Lys Cys Ala  
 1 5 10 15  
 Leu Ser Val Phe Asp Lys Glu Lys Gly Asn Trp Phe Val Ile Asp Ala  
 20 25 30  
 Thr Asn Lys Ser Val Gly Ser Leu Ala Ala Cys Ile Ser Lys Leu Leu  
 35 40 45  
 Gln Gly Lys Tyr Arg Val Asp Tyr Asn Pro Asn Lys Val Asn Ser Ser  
 50 55 60  
 Ser Val Ile Val Val Asn Ala Ile His Val Lys Phe Tyr Gly His Thr  
 65 70 75 80  
 Trp Asp Thr Lys Ile Tyr Lys Phe Pro Arg Lys Ser His Ser Lys Ser  
 85 90 95  
 His Lys Ile Leu Ser Cys Lys Thr Val Phe Ala Arg Asn Pro Ser Met  
 100 105 110  
 Ile Leu Asn Leu Ala Val Lys Arg Met Leu Pro Asn Asn Arg Leu Arg  
 115 120 125  
 Gln Ile Phe Tyr Arg Lys Leu Tyr Val Tyr Pro Gly Ala Leu His Pro  
 130 135 140  
 His Trp Gly Ile Pro Gln Val Val Val Pro Lys Lys Asn Val Val Lys  
 145 150 155 160  
 Lys Glu Glu Gln Gln Asp Ile Lys Thr Phe Thr Ile Leu  
 165 170

<210> 129  
 <211> 2500  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 129  
 Met Asp Ser Asn Ile Asn Ile Asn Tyr Asp Asn Tyr Gly Pro Gln Asn

1	5				10				15						
His	Asn	Pro	Leu	Ser	Val	Glu	Glu	Tyr	Thr	Leu	Arg	Ser	Arg	Gly	Asn
			20					25					30		
Ile	Asp	Glu	Pro	Gly	Val	Leu	Ser	Asn	Met	Asn	Ser	Val	Ser	Asn	Ile
		35					40					45			
Ser	Thr	Ser	Thr	Asn	Asn	Ile	Gly	Thr	Asn	Thr	Met	Asn	Phe	Asn	Asn
	50					55					60				
Ser	Lys	Gly	Phe	Ile	Ile	Asn	Pro	Phe	Asn	Glu	Asn	Tyr	Lys	Lys	Asn
	65				70					75					80
Asn	Ile	Cys	Thr	Tyr	Leu	Asp	His	Glu	Ser	Thr	Asn	Ile	Asn	Gly	Gly
				85					90					95	
Val	Asn	Gln	Tyr	Asp	Asn	His	Met	Asp	Gln	Met	Asn	Gln	Met	Asn	Gln
			100					105					110		
Thr	Asn	Gln	Met	Asn	Gln	Met	Asn	Gln	Met	Asn	Gln	Thr	Asn	Gln	Met
		115					120					125			
Asn	Gln	Met	Asn	Gln	Met	Asn	Gln	Met	Asn	Gln	Thr	Asn	Gln	Met	Asn
	130					135					140				
Gln	Thr	Asn	Gln	Met	Asn	Gln	Thr	Asn	Gln	Met	Asn	Gln	Thr	Asn	Gln
	145					150				155					160
Met	Asn	Gln	Thr	Asn	Gln	Met	Asn	Gln	Met	Asn	Ile	Gln	His	Gln	Arg
				165					170					175	
Asn	Ser	Val	Asn	Ala	Pro	Asn	Ile	Tyr	Ile	Gln	Asn	Phe	Asp	Gln	Asn
			180					185					190		
Cys	Asp	Ile	Tyr	Tyr	Asn	Asn	Asn	Gly	Lys	Ser	Asn	Gly	Asn	Leu	Asn
		195					200					205			
Val	Gln	Gln	Ser	Asp	Asn	Ala	His	Asn	Pro	Leu	Ile	Tyr	Asp	Ile	Ser
	210					215					220				
Glu	Leu	Tyr	Asn	Arg	Glu	Lys	Asn	Glu	Glu	Gln	Lys	Thr	Ile	Phe	Arg
	225				230					235					240
Asp	Glu	Tyr	Ser	Asn	Arg	Thr	Ile	Ile	Lys	Ala	Leu	Ile	Asn	Lys	Ile
				245					250					255	
Thr	Asn	Thr	Pro	Met	Ile	Asn	Asn	Ser	Val	Lys	Asn	Ile	Glu	Asp	Thr
			260					265					270		
Asn	Ser	Ser	Tyr	Asn	Thr	Asp	Glu	Asn	Val	Tyr	Asn	Val	Cys	Ser	Met
		275					280					285			
Asp	Glu	Tyr	Thr	Thr	Asn	Lys	Tyr	Ile	Ser	Lys	Asn	Tyr	Asn	Glu	Asn
	290					295					300				
Asp	Gln	Val	Ile	Val	Gln	Gly	Asn	Asn	Thr	Val	Pro	Glu	Asn	Asp	Asn
	305				310					315					320
Asn	Glu	Ile	Tyr	Lys	Lys	Glu	Asn	Leu	Ser	Ile	Phe	Gln	Asp	Ser	Leu
				325					330					335	
Lys	Asp	Asn	Ile	Val	Glu	Tyr	Asn	Ala	Tyr	His	Asp	Ser	Arg	His	His
			340					345					350		
Lys	Pro	Ile	Asp	Glu	Gln	Val	Ala	His	Tyr	Ile	Asn	Asn	Tyr	Tyr	Thr
		355					360					365			
Asn	Asn	Asn	Asn	Asp	Pro	Tyr	Asn	Arg	Asn	Ser	Thr	Asn	Asn	Asn	Gly
	370					375					380				

Ile	Ala	Glu	Asn	Asn	Ile	Asn	Val	Asn	Ser	Ala	Phe	Asn	Gln	Tyr	Lys
385					390					395					400
Glu	Asn	Lys	Gln	Tyr	Tyr	Asp	Leu	Leu	Asn	Thr	Phe	Thr	Gly	Asn	Ile
				405					410					415	
Met	Glu	Arg	Lys	Asn	Ile	Met	Met	Gln	Asn	Val	Asp	Tyr	Asn	Glu	Arg
			420					425					430		
Ile	Asn	Gly	Asn	Ser	Ile	Asn	Ile	Gln	Gly	Ser	Asn	Asn	Gln	Gln	Met
		435					440					445			
Asn	Asp	Gln	Leu	Val	Asp	Asn	Asn	Asn	Val	Asn	Met	Cys	Leu	Met	Gln
	450					455					460				
Gly	Pro	Tyr	Ile	Asn	Asn	His	Asn	Met	Lys	Asn	Phe	Tyr	Met	Gly	Ser
465				470						475					480
Asn	Tyr	Gly	Gly	Asn	Asn	Asn	Met	Val	His	Asn	Ile	Met	Gly	Thr	Asn
				485					490					495	
Asn	Met	Val	His	Asn	Asn	Met	Val	His	Asn	Asn	Met	Gly	Thr	Asn	Asn
			500					505					510		
Met	Gly	Thr	Asn	Asn	Met	Gly	Asn	Asn	Asn	Ile	Gly	Thr	Asn	Asn	Met
		515					520					525			
Gly	Asn	Asn	Asn	Met	Gly	Asn	Asn	Asn	Ile	Gly	Thr	Asn	Asn	Met	Val
	530					535					540				
His	Asn	Asn	Met	Gly	Asn	Asn	Asn	Ile	Gly	Thr	Asn	Asn	Met	Val	His
545					550					555					560
Asn	Asn	Met	Gly	Asn	Asn	Tyr	Met	Gly	Asn	Asn	Tyr	Met	Gly	Asn	Asn
				565					570					575	
Tyr	Met	Gly	Asn	Asn	Tyr	Met	Gly	Asn	Asn	Tyr	Met	Val	His	Asn	Asn
			580					585					590		
Met	Ser	Thr	Asn	Asn	Met	Gly	Asn	Asn	Tyr	Met	Gly	Asn	Asp	Asn	Met
		595					600					605			
Arg	Asn	Asn	Asn	Met	Gly	Thr	Asn	Asn	Met	Gly	Thr	Asn	Asn	Met	Gly
	610					615					620				
Thr	Asn	Asn	Met	Gly	Thr	Asn	Asn	Met	Gly	Thr	Asn	Asn	Met	Gly	Thr
625					630					635					640
Asn	Asn	Met	Gly	Thr	Asn	Asn	Met	Gly	Asn	Asn	Asn	Met	Gly	Asn	Asn
				645					650					655	
Tyr	Ile	Gly	Asn	Asp	Asn	Met	Arg	Asn	Asn	His	Ile	Ile	Asp	Tyr	Ile
			660					665					670		
Ile	Asn	Tyr	Met	Val	Asn	Asn	Met	Val	Asn	Asn	Met	Val	Asn	Thr	Met
		675					680					685			
Val	Asn	Asn	Met	Val	Asn	Asn	Met	Val	Asn	Tyr	Met	Val	Asn	Asn	Met
	690					695					700				
Val	Asn	Asn	Met	Val	Asn	Asn	Met	Gly	Asn	Asn	Met	Gly	Asn	His	Asn
705					710					715					720
Met	Ile	Asn	His	Met	Gly	Asn	Asp	Arg	Ile	Gly	Asn	Tyr	Asn	Met	Gly
				725					730					735	
Asn	Asn	Leu	Asn	Ser	Asn	Asn	Tyr	Met	Val	Asn	Asn	Tyr	Ser	Asn	Asn
			740					745					750		



Thr Tyr Gly Asn Asn Asn Asn Asp Val Asn Arg Asn Met Asn Tyr Asn  
 755 760 765  
 Tyr Ala Gly Tyr Asn His Met Tyr Ala Arg Cys Leu Asn Asn Asn Asn  
 770 775 780  
 Met Asn Asn Thr Pro Gln Tyr Ile Ile Pro Asp Asn Lys Asn Lys Ile  
 785 790 795 800  
 Ser Ala Val His Pro Phe Thr Lys Glu Thr Asn Thr Gly Ile Ile Leu  
 805 810 815  
 Asn Asn Ala Ser Gln Asp Tyr Thr Leu Ser Arg Ser Leu Gly Tyr Asn  
 820 825 830  
 Leu Asn Phe Ser Met Ile Gln Ser Glu Asn Asp Phe Asn Ser Thr Pro  
 835 840 845  
 Ser Asn Ile Glu Pro Val Asn Asn Gln Pro Leu Asn Val Glu Pro Ala  
 850 855 860  
 Ile Phe Glu Ala Val Asn Leu Glu Leu Phe Asp Ala Glu Ser Leu Asn  
 865 870 875 880  
 Asp Gln Tyr Val Cys Asp Glu Asn Ser Asn Thr Asp Val Ile Lys Ser  
 885 890 895  
 Lys Pro Leu Val Asp Asn Pro Leu Asp Asp Glu His Ile Tyr Ser Glu  
 900 905 910  
 His Leu Asn Asn Arg Ile Leu Asn Asp Glu Thr Leu Pro Ser Ala Gln  
 915 920 925  
 Leu Asn Val Glu Thr Leu Tyr Gly Glu His Glu Tyr Asn Glu Gln Arg  
 930 935 940  
 Met Asn Glu Gln Arg Ile Asn Glu Gln Arg Met Asn Glu Gln Arg Met  
 945 950 955 960  
 Asn Glu Gln Ser Ile Asn Glu Asp Tyr Thr Ser Glu Asp Tyr Thr Ser  
 965 970 975  
 Glu Glu Tyr Thr Asp Glu Asp Tyr Thr Asn Ile Lys Tyr Ile Tyr Ala  
 980 985 990  
 Glu Tyr Ile Asn Gly Gln Tyr Ile Asn Gly Gln Tyr Ile Asn Gly Gln  
 995 1000 1005  
 Tyr Ile Asn Gly Gln Tyr Ile Asn Glu Gln Tyr Thr Ser Glu Glu Tyr  
 1010 1015 1020  
 Thr Ser Glu Glu Tyr Thr Ser Glu Gly Tyr Thr Asn Glu Gly Tyr Thr  
 1025 1030 1035 1040  
 Asn Glu Gln Tyr Ile Asn Gly Gln Tyr Ile Asn Gly Gln Tyr Ile Asn  
 1045 1050 1055  
 Gly Gln Ser Ile Glu Asp Gln Ser Thr Asn Asp Gln Ser Ile Glu Asp  
 1060 1065 1070  
 Gln Ser Thr Asn Asp Gln Ser Ile Glu Asp Gln Ser Thr Asn Asp Gln  
 1075 1080 1085  
 Ser Ile Glu Asp Gln Ser Thr Asn Asp Gln Ser Ile Asn Glu Gln Ser  
 1090 1095 1100  
 Thr Asn Asp Gln Pro Pro Asn Glu Gln Pro Pro Asn Glu Gln Pro Pro  
 1105 1110 1115 1120  
 Asn Glu Glu Ser Thr Glu Asp Gln Cys Leu Ile Asp Lys Asn Val Arg

1125										1130										1135									
Asn	Glu	Gln	Leu	Ser	Asp	Ala	Thr	Leu	Asn	Arg	Tyr	Phe	Leu	Glu	Cys														
					1140										1145														
Ser	Gln	Arg	Asn	Thr	Glu	Ser	Leu	Cys	Asn	Glu	Ser	Leu	Ser	Asp	Pro														
					1155										1160														
Tyr	Met	Asn	Asn	Asp	Asn	Ser	His	Ser	Gln	Tyr	Ser	Asn	Ser	Tyr	Glu														
					1170										1175														
Thr	Glu	Asn	Asp	Asn	Leu	Ser	Ser	Glu	Asn	Pro	Asn	Val	Asp	Asp	Leu														
					1185										1190														
Ser	Gly	His	Ile	Gln	Asn	Asn	Asp	Asn	Ser	Phe	Asn	Ser	Ser	Ser	Ser														
					1205										1210														
Asn	Val	Pro	Leu	Asn	Val	Asn	Pro	Thr	Asn	Ile	Glu	Asn	Ser	Asn	Ile														
					1220										1225														
Leu	Pro	Leu	Ser	Ile	Glu	Gly	Thr	Asn	Ser	Ala	His	Leu	Asn	Phe	Gly														
					1235										1240														
Arg	Ser	Tyr	Ser	Asp	Pro	Phe	Pro	Phe	His	Ser	Pro	Asn	Thr	Ser	Ile														
					1250										1255														
Leu	Glu	Phe	Cys	Cys	Ser	Arg	Tyr	Phe	Ser	Ser	Asn	Phe	Pro	Phe	Glu														
					1265										1270														
Lys	Thr	Met	Ile	Gln	Asn	Glu	Gln	Val	Gln	Glu	Ser	Leu	Tyr	Ile	Ser														
					1285										1290														
Asn	Asn	Phe	Ile	Lys	Ala	Asn	His	Val	Glu	Arg	Ile	Lys	Ile	Thr	His														
					1300										1305														
Ile	Asp	Thr	Phe	Thr	Ser	Asn	Asn	Leu	Leu	Val	Lys	Asn	Glu	Ile	Thr														
					1315										1320														
Asp	Lys	Glu	Ile	Ser	Glu	Asn	Lys	Asn	Glu	Lys	Ile	Ile	Glu	Asn	Glu														
					1330										1335														
Lys	Ile	Ile	Glu	Asn	Glu	Lys	Val	Val	Lys	Asn	Glu	Asn	Met	Val	Lys														
					1345										1350														
Asn	Glu	Lys	Val	Val	Lys	Asn	Lys	Asn	Val	Val	Lys	Asn	Glu	Asn	Val														
					1365										1370														
Val	Glu	Lys	Asn	Ser	Arg	Phe	Ile	Lys	Lys	Glu	His	Asn	Ile	Ser	Met														
					1380										1385														
Leu	Asn	Val	Pro	Asn	Tyr	Tyr	Glu	Asn	Asn	Thr	Arg	Gly	Lys	Asp	Ile														
					1395										1400														
Thr	Asn	Asn	Asn	Asn	Ile	Ser	Gly	Asp	Pro	Leu	Val	Asn	Gly	Ile	Ser														
					1410										1415														
Thr	Leu	Ser	Tyr	Lys	Pro	Tyr	Ser	Thr	Tyr	Asn	Cys	Ile	Ser	Asn	Ile														
					1425										1430														
Ile	Glu	Glu	Glu	Lys	Glu	Ile	Lys	Lys	Phe	Val	Asn	Lys	Lys	Lys	Asn														
					1445										1450														
Ser	Leu	Asn	His	Ile	Asn	Arg	Asn	Glu	Lys	Ile	Tyr	Ile	Gly	Asp	Asn														
					1460										1465														
Lys	Lys	Asn	Tyr	Ile	Ile	Glu	Asn	Ile	Cys	Lys	Cys	Phe	His	Phe	His														
					1475										1480														
Ser	Leu	Gly	Leu	Asn	Gly	Gly	Leu	Pro	Glu	Ile	Asn	Val	Asn	Lys	Asp														
					1490										1495														

Lys Asn Leu Tyr Asn Asn Leu His Ile Thr Asn Cys Leu Leu Phe Lys  
 1505 1510 1515 1520  
 Lys Glu Thr Thr Glu Glu Val Leu Lys Lys Phe Leu Pro Asn Asn Glu  
 1525 1530 1535  
 Ile Asn Ile Met Ser Tyr Tyr Tyr Asn His Ile Leu Tyr Arg Leu Arg  
 1540 1545 1550  
 Met Lys Asn Lys Tyr Glu Asp Ile Ile His Asp Lys Leu His Val Tyr  
 1555 1560 1565  
 His Lys Leu Lys Glu Leu Ile Lys Tyr Gln Tyr Lys Glu Tyr Leu Leu  
 1570 1575 1580  
 His Lys Thr Val Tyr Pro Arg Asn Ile Cys Arg Asn Glu His Met Asn  
 1585 1590 1595 1600  
 Gln Lys Asp Asn Cys Thr Lys Asp Ile Tyr Ile Asn Glu Asp Asn Asn  
 1605 1610 1615  
 Lys Thr Glu Leu Asn Ile Glu Lys Ile Ser Lys Glu Asn Asn Glu Glu  
 1620 1625 1630  
 Asn Lys Asn Thr Tyr Met Asn Thr Thr Ser Tyr Lys Glu Leu Leu Gly  
 1635 1640 1645  
 Asn Tyr Ile Asn Phe Leu Asp Thr Phe Asn Leu Tyr Asp Asn Ile Tyr  
 1650 1655 1660  
 Ser Lys Glu Lys Tyr Glu Thr Asp Glu Asn Asp Leu Ile Leu Asn Asn  
 1665 1670 1675 1680  
 Lys Glu Pro Ser Ile Ser Tyr Asn Phe Asn Ser Asn Tyr Asn Asn Asp  
 1685 1690 1695  
 Leu Leu Lys Ser Asp Asn Val Tyr Glu Tyr Ile Tyr Lys Asp Ile Tyr  
 1700 1705 1710  
 Tyr Asp Ser Tyr Tyr Asp Lys Asn Thr Tyr Ile Tyr Tyr Asp Asn Lys  
 1715 1720 1725  
 Tyr Thr Phe His Lys Thr Asn Ser Phe Ile Asn Asp Glu Asn Gly Cys  
 1730 1735 1740  
 Tyr His Leu Leu Thr Tyr Pro Leu Glu Asp Glu Ile Glu Asn Met Asn  
 1745 1750 1755 1760  
 Tyr Tyr Glu Lys Lys Lys Gly His Lys Arg Lys Ile Ala His Asn Lys  
 1765 1770 1775  
 Asp Met Asn Val Asn Leu Lys Arg Lys Lys Ile Lys Tyr Glu Asn Glu  
 1780 1785 1790  
 Asn Ile Ile Ser Asp Lys Leu Asn Val Met Asn Thr Glu Tyr Asn Tyr  
 1795 1800 1805  
 Ile His Lys His Asp Glu Lys Glu Lys Gly Ser Cys Ile Leu Asn Lys  
 1810 1815 1820  
 Asp Asn Lys Asn His Asn Lys Leu Leu Leu Lys Asp Lys Lys Ile Tyr  
 1825 1830 1835 1840  
 Asn Val Lys Lys Lys Trp Glu Arg Met Leu Pro Ile Ser Lys Arg Lys  
 1845 1850 1855  
 Lys Leu Ser Thr Gln Ile Arg Ile Asn Lys Ile Lys Lys Asn Met Gln  
 1860 1865 1870

Lys Ser Cys Lys Ile Leu Asn Ile Lys Tyr Lys Asp Val Ile Tyr Ser  
 1875 1880 1885  
 Glu Phe Phe Arg Leu Ser Ser Lys Arg Lys Lys Asn Cys Asn Glu Leu  
 1890 1895 1900  
 Leu Asn Gly Glu Lys His Val Glu Lys Asn Lys Thr Asn Ala Leu Leu  
 1905 1910 1915 1920  
 Asn Gly Gly His Thr Phe Val Glu Asp Gln Lys Lys Gly Lys Glu Tyr  
 1925 1930 1935  
 Lys Lys Glu Glu Arg Glu His Ile Val Gln Gly Glu Ile Lys Glu Lys  
 1940 1945 1950  
 Glu Lys Tyr Thr Leu Gly Gly Arg Glu Arg Gly Ser Arg Arg Ser Lys  
 1955 1960 1965  
 Glu Ser Asp Ser Phe Arg Gly Arg Glu Arg Gly Ser Arg Arg Ser Lys  
 1970 1975 1980  
 Glu Val Asp Thr Leu Lys Gly Arg Glu Arg Asp Ser Leu Lys Gly Lys  
 1985 1990 1995 2000  
 Glu Arg Asp Ser Leu Lys Gly Arg Glu Arg Asp Ser Leu Lys Gly Lys  
 2005 2010 2015  
 Glu Arg Asp Ser Phe Arg Gly Lys Glu Arg Asp Ser Phe Arg Gly Lys  
 2020 2025 2030  
 Glu Arg Glu Thr Leu Lys Gly Arg Glu Arg Asp Ser Leu Lys Gly Arg  
 2035 2040 2045  
 Glu Arg Asp Ser Leu Lys Gly Arg Glu Arg Gly Ser Phe Arg Gly Lys  
 2050 2055 2060  
 Glu Arg Asp Ser Phe Arg Gly Lys Glu Arg Asp Ser Phe Arg Gly Lys  
 2065 2070 2075 2080  
 Glu Arg Asp Ser Phe Arg Gly Arg Lys Arg Asp Thr Phe Arg Ser Arg  
 2085 2090 2095  
 Asp Arg Gly Ser Phe Arg Asn Lys Thr Gly Asp Val Tyr Lys Ser Arg  
 2100 2105 2110  
 Asp Ile Asn Leu Tyr Lys Glu Glu Asn Asn Lys Lys Lys Asp His Tyr  
 2115 2120 2125  
 Tyr Val Asp Lys Tyr His Tyr Ile Asn Lys Tyr Tyr Pro Glu Lys Tyr  
 2130 2135 2140  
 Ser Arg Lys Phe Asn Tyr Asn His Ser Ser Gly Ser Tyr His Asn Ala  
 2145 2150 2155 2160  
 Gln Lys Tyr Asp Ser Leu Arg Tyr Glu Gln Lys Glu Lys Pro Tyr Lys  
 2165 2170 2175  
 Ile Thr Glu Asn Asn Lys Lys Asn Glu Gly Asn Glu Ile Leu Lys Lys  
 2180 2185 2190  
 Tyr Ser Ile Glu Asn Glu Glu Lys Asn Asn Tyr Asp Lys Glu Gln Asn  
 2195 2200 2205  
 Glu Asn Cys Ile Leu Asp Lys Asp Thr Gln Cys Asn Val Asn Thr Lys  
 2210 2215 2220  
 Glu Lys Asn Asn Leu Asp Asn Lys Lys Ser Phe Pro Ser Asn Ile Lys  
 2225 2230 2235 2240  
 Val Lys Leu Glu Glu Glu Glu Lys Ser Asp Asp Lys Arg Asp Asp Lys

```
<210> 130
<211> 558
<212> PRT
<213> Plasmodium falciparum
```

```

<400> 130
Met Asn Lys Lys Lys Val Thr Phe Lys Asn Asp Val Thr Tyr Glu Asn
  1                    5          10          15

Ala Asp Leu Asn Glu Lys His Glu Tyr Val Glu Ser Pro Phe Phe Phe
          20          25          30

Lys Arg Glu Glu Asn Glu Asn Ser Tyr Glu Glu Glu Glu Leu Gln Glu
          35          40          45

Met Leu Arg His Phe Asn Pro Leu Asp Phe Gly Ile Lys Glu Lys Leu
  50          55          60

Ser Glu Ser Glu Lys Lys Ile Leu Val Lys Glu Ile Met Gly Arg Ser

```

65					70					75					80				
Lys	Lys	Cys	Thr	Met	Lys	Asn	Asn	Asp	Met	Leu	Asn	Glu	Glu	Asn	Lys				
				85					90					95					
Ser	Cys	Glu	Lys	Thr	Lys	Glu	Arg	Lys	Lys	Gln	Asp	Ile	Phe	Ile	His				
			100					105					110						
Asp	Asn	Ile	Ile	His	Met	Asn	Asp	Asn	Ile	Lys	Lys	Glu	Ile	Lys	Glu				
		115					120					125							
Glu	Asp	Gln	Asn	Gly	Ser	Asn	Ser	Lys	Glu	Asn	Asp	Lys	Lys	Lys	Lys				
	130					135					140								
Lys	Asn	Lys	Lys	Lys	Lys	Ile	Asn	Asn	Asn	Asp	Lys	Lys	Asn	Glu	Leu				
	145					150					155				160				
Ser	Tyr	Leu	Asp	Gly	Asp	Cys	Tyr	Phe	Pro	Asn	Asp	Gly	Tyr	Asp	Tyr				
				165					170					175					
Glu	Gln	His	Leu	Lys	Pro	Ile	Ser	Lys	Asn	Phe	Ile	Glu	Ile	Lys	Asn				
			180					185					190						
Lys	Ser	Glu	Gln	Asn	Phe	Phe	Glu	Ile	Gln	Pro	Asn	Asn	Glu	Glu	Glu				
		195					200					205							
Lys	Glu	Leu	Phe	Lys	Thr	Phe	Asp	Met	Asp	Asn	Tyr	Glu	Glu	Leu	Asn				
	210					215					220								
Asp	Asn	Phe	Val	Cys	Glu	Ala	Gln	Asn	Val	Glu	Glu	Val	Gly	Glu	Leu				
	225					230					235				240				
Lys	Val	Asp	Lys	Lys	Leu	Ile	Trp	Gly	Asn	Val	Gln	Pro	Phe	Leu	Tyr				
				245					250					255					
Ile	Pro	Ser	Asn	Asp	Tyr	Met	Asp	Asp	Ala	Glu	Asp	Met	Val	Asn	Met				
			260					265					270						
Asp	Asn	Ile	Asn	Asp	Asn	Ile	Asn	Asp	Asn	Ile	Asn	Asp	Asn	Ile	Asn				
		275					280					285							
Asp	Lys	Ile	Asn	His	Lys	Ile	Tyr	Asp	Lys	Ile	Tyr	Asp	Lys	Ile	Asn				
	290					295					300								
Ser	Asp	Asp	Ile	Phe	Ser	Thr	Asp	Ser	Asp	Thr	Asp	Asn	His	Ile	Asn				
	305					310					315				320				
Lys	Asn	Tyr	Asn	Lys	His	Asn	Asn	Ile	Asn	Glu	Asp	Gln	Ile	Ile	Phe				
				325					330					335					
Asp	Asp	Lys	Leu	Asn	Asp	Ile	Gly	Leu	His	Asn	Asn	Gln	Asp	Ile	Ser				
			340					345					350						
Thr	Lys	Asn	Tyr	Asp	Glu	Lys	Gly	Thr	Tyr	Glu	Asn	Asn	Met	Asp	Ser				
				355			360						365						
Ile	Lys	Phe	Ser	Asp	Leu	Val	Glu	Tyr	Gln	Trp	Arg	Asn	Asn	Leu	Asn				
	370					375					380								
Pro	Val	Asn	Asp	Ile	Lys	Lys	Ile	Ile	Lys	Lys	Lys	Lys	Lys	Gly	Lys				
	385					390					395				400				
Asn	Val	Lys	Leu	Lys	Leu	Asp	Asp	Ile	Ile	Val	Asn	Ile	Asn	Asp	Glu				
				405					410					415					
Asp	Lys	Lys	Lys	Ile	Met	Gln	Ile	Val	Asn	Leu	Gln	Asn	Glu	Glu	Ile				
			420				425						430						
Arg	Asn	Gln	Thr	Arg	Tyr	Ser	Ser	Lys	Gly	Asn	Asp	Lys	Asn	Val	Glu				
			435				440					445							

Asn Val Asn Val Asn Ala Asn Glu Asn Glu Asn Glu Glu Glu Gln Gln  
 450 455 460  
 Lys Tyr Glu Gly Gly Gly His Tyr Tyr Asp Asp Glu Asp Ser Tyr Ser  
 465 470 475 480  
 Glu Asn Leu Glu His Ser Ser Ser Ser Leu Ser Tyr Asp Cys Glu Thr  
 485 490 495  
 Ile Leu Thr Thr Lys Thr Asn Thr Thr Asn His Pro Tyr Lys Leu Ile  
 500 505 510  
 Ile Pro Lys Gln Ile Lys Pro Thr Pro Leu Leu Leu Asn Ser Gln Lys  
 515 520 525  
 Lys Asn Glu Asn Glu Thr Lys Asn Lys Asn Lys Asn Lys Asn Glu Asp  
 530 535 540  
 Ile Lys Leu Glu Arg Tyr Met Ile Leu Glu Lys Val Asn Thr  
 545 550 555

<210> 131  
 <211> 306  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 131  
 Met Asn Leu Leu Arg Arg Asn Ile Tyr Asn Val Phe Ile Leu Lys Asn  
 1 5 10 15  
 Lys Lys Ile Lys Ile Gly Tyr Asn Asn Lys Val His Phe Phe Phe His  
 20 25 30  
 Thr Leu Asp Glu Lys Ile Asn Ser Ile Lys Glu Asn Glu Glu Ala Tyr  
 35 40 45  
 Asn Phe Glu Asp Thr Ile Ile Arg Arg Ile Asn Lys Met Asn Asn Thr  
 50 55 60  
 Ala Leu Val Phe Thr Cys Glu Asn Ile Asn Lys Lys Lys Ile Asn Asn  
 65 70 75 80  
 Pro Tyr Ile Trp Glu Leu Ile Tyr Asn Arg Ile Asn Glu Ile Tyr His  
 85 90 95  
 Ser Phe Ser Leu Thr Glu Ile Ile Val Leu Phe His Ala Tyr Cys Asn  
 100 105 110  
 Ser Ile Ser Phe Asp Ile Lys Ser Met Asn Ser Leu Ile Asn Phe Leu  
 115 120 125  
 Trp Asn Ile Leu Glu Asn Lys Ile Asn Asp Val Glu Asp Leu Ser Ser  
 130 135 140  
 Leu Leu Ala Leu Tyr Val Cys Ala Glu Lys Thr Lys Asn Leu Thr Lys  
 145 150 155 160  
 Arg Glu His Ile Ser Asn Leu Ile Leu Gln Arg Tyr Ile Thr Leu Ile  
 165 170 175  
 Glu Gln Asp Lys Ile Phe His Ile Asn Glu Ile Arg Leu Ser Ile Phe  
 180 185 190  
 Leu Lys Ile Leu Cys Ser His Asn Lys Asn Ile Ile Gln Val Asp Lys  
 195 200 205  
 Lys Tyr Ile Met Gln Phe Ser Asn Asp Ile Ser Lys Ile Ile Ile Arg  
 210 215 220

Asn Ile Asn Thr Leu Met Leu Cys Leu His Phe Phe Ile Lys Tyr Gln  
 225 230 235 240  
 Ile Tyr Asp Glu Pro Phe Ile Ile Leu Leu Lys Gln Ile Gln Asn Leu  
 245 250 255  
 Leu Ile Phe Lys Lys Glu Ile Asn Val Asn Val Ile Leu Lys Tyr Phe  
 260 265 270  
 Ser Phe Ile Ser Asn Leu Arg Asn Pro Tyr Ala Leu Gln Glu Ile Lys  
 275 280 285  
 Asn Val Leu Ser Ile Ile Tyr Leu Ser Lys Cys Glu Ile Ile Gly Ala  
 290 295 300  
 Gln Met  
 305

<210> 132  
 <211> 1714  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 132  
 Met Asp Asn Asn Gly Val Ala Lys Thr Leu Lys Lys Asp Ile Ser Tyr  
 1 5 10 15  
 Phe Asp Glu Thr Lys Glu Tyr Ser Lys Lys Arg Phe Asp Lys Phe Asn  
 20 25 30  
 Asp Ile Tyr Glu Ile Ile Thr Asn His Lys Asn Lys Gln Pro His Ile  
 35 40 45  
 Lys Glu Asn Asn Ile Lys Tyr Ile Thr Arg Asn Val Asn Tyr Asp Arg  
 50 55 60  
 Leu Ser Val Asp Glu Lys Lys Lys Lys Asn Asp Ile Asn Asn Ile Asp  
 65 70 75 80  
 Lys Tyr Glu Lys Thr Lys Thr Cys Ser Tyr Val Leu Asn Asn Leu His  
 85 90 95  
 Lys Lys Tyr Asn His His Asn Asn Lys Met Tyr Asp Glu Tyr Lys Phe  
 100 105 110  
 Tyr Asp Tyr Tyr Glu Leu Ile Asn Lys Ile Lys Lys Leu Lys Gly Phe  
 115 120 125  
 Lys Asn Val Ile Glu Glu Arg Gly Lys Gly Asn Asp Asn Arg Leu Gly  
 130 135 140  
 Val Ser Ser Thr Ser Asn Asp Lys Lys Lys Asn Asn Lys Lys Arg Tyr  
 145 150 155 160  
 Asn Asn Asn Asn Asn Asn Asp Asn Asn Asn Asp Ile Asn Asn Asp Cys  
 165 170 175  
 Asn Asn Asn Lys Tyr Asn Pro Cys Cys Ser Ser Cys Asn Gly Asn Val  
 180 185 190  
 Leu Ser Ser Ser Lys Thr Phe Asn Met Cys Glu Gly Asp Lys Lys Ile  
 195 200 205  
 Ser Tyr Gly Arg Gln Ile Thr Asn Leu Val Ser Cys Tyr Lys Tyr Asn  
 210 215 220  
 Asn Gln Leu Lys Ser Pro Tyr Asn Ile His Thr Ile Asn Gln Gln Val  
 225 230 235 240



His Asp Asn Asn Ile Tyr Val Asp Asn Gln His Met Leu Tyr His Asn  
 245 250 255  
 Tyr Thr Asp Asn Leu Lys Tyr Ser Asn Tyr Asn Lys Met Asn Asp Leu  
 260 265 270  
 Ser Tyr Asn Leu His Glu Lys Lys Asn Ser Phe Ser Asn Phe Ile Asn  
 275 280 285  
 Ser Gly Pro Arg Asp Asn Pro Met Glu Leu Cys Lys Lys Leu Lys Lys  
 290 295 300  
 Ala Val Glu Tyr Lys Glu Arg Val Ile Asp Ile Asn Lys Glu Lys Asp  
 305 310 315 320  
 Phe Val Leu Leu Gly Ile Ser Lys Thr Cys Val Lys Lys Cys Asn Thr  
 325 330 335  
 Cys Ser Gly Asp Asn Val Thr Lys Asp Ile Asp Lys Cys Val Glu Asp  
 340 345 350  
 Glu Glu Lys Ser Lys Glu Gly Val Ile Leu Asn Tyr Met Lys Lys Asp  
 355 360 365  
 Ile Leu Phe Tyr Asn Thr Phe Asn Arg Asn Asn Asn Asp Pro Asn Arg  
 370 375 380  
 Lys Glu Lys Pro Lys Glu Cys Asp Lys Tyr Asn Lys Asp Asp Val His  
 385 390 395 400  
 Val Leu Cys Asp His Asp His Phe Ser His Ser Lys Ser Ser His Thr  
 405 410 415  
 Thr Lys Asn Ser Asn Thr Lys Leu Tyr Asn Val Lys Glu Lys His Ile  
 420 425 430  
 His Ile Asn Lys Val Tyr Asn Asn Val Tyr Phe Val Glu Gly Gln Glu  
 435 440 445  
 Lys Leu Tyr Ser Pro Ser Ile Lys Glu Glu Thr Gln Phe Tyr Ile Gln  
 450 455 460  
 Asn Asp Tyr Lys His Asp Asp Asn Val Lys Met Leu Ser Tyr Asn Tyr  
 465 470 475 480  
 Tyr Asn Asp Met Val Tyr Lys Asn Ser Lys Gly Met Ile Asp Ser Leu  
 485 490 495  
 Ser Thr Gln His Ala Phe Lys Gly Glu Glu Thr Val Ile Asn Ile Asn  
 500 505 510  
 Lys Leu Arg Arg Arg Phe Ser Ile Met Asn Arg Lys Val Tyr Ser Asp  
 515 520 525  
 Ser Val Leu Tyr Phe Tyr Gly Ala Pro Trp Trp Leu Asn Lys Ile Arg  
 530 535 540  
 Arg Gly Gln Lys Ile Gly Gln Glu Lys Lys His Lys Lys Lys Asp Glu  
 545 550 555 560  
 Asn Lys Lys Lys Asn Lys Lys Asn Lys Asn Lys Asn Asn Asn Ser  
 565 570 575  
 Asn Asn Ile Asn Asn Lys His Gly Arg Val Ile Gln Tyr Thr Asp Glu  
 580 585 590  
 Lys Ile Gln Asn Asp Tyr Cys Lys Asn Lys Glu Ser Ser Lys Arg Gly  
 595 600 605

Asn His Lys Met Met Arg Lys Glu Lys Asn Leu Asn Ser Ser Leu <sup>Hy</sup>Leu  
 610 615 620

Ser Ile Asn Gly Lys Cys Tyr Asn Lys Trp Lys Lys Asn Tyr Asn Lys  
 625 630 635 640

Thr Arg Lys Pro Lys Asn Glu Gly Arg Lys Gly Glu Lys Tyr Ile Tyr  
 645 650 655

Cys Tyr Glu Asn Ile Lys Ile Leu Glu Asp Ile Lys Asp Arg Phe Phe  
 660 665 670

Asn Asp His Lys Arg Asn Asn Ile Leu Asn Glu Glu Asn Phe Ile Lys  
 675 680 685

Glu His Gln Ile Asn Gly Arg Asn Lys Glu His Val Asn Glu Lys Asn  
 690 695 700

Lys Glu Glu Asp Thr Phe Asn Ile Ser Lys Glu Asn Thr Lys Glu Gly  
 705 710 715 720

Ser Tyr Ile Ile Thr His Lys Asn Lys Arg Asn Met Asp Asn Ile Lys  
 725 730 735

Ile Gly Arg Tyr Asp Asn Ile Asn Asp Lys Lys Glu Phe Ser Ser Asn  
 740 745 750

Ile Leu Tyr Lys Cys Val Lys Lys Asn Asp Lys Ile Asn Lys Ser Gln  
 755 760 765

Thr Ser Leu Phe Phe Glu Phe Met Lys Gly Lys Gly Asp Gln Lys His  
 770 775 780

Asn Val Ile Lys Lys Glu Asp Val Phe Ile Lys Thr Phe Arg Thr Asn  
 785 790 795 800

Lys Ser Pro Thr Glu Leu Thr Lys Lys Ile Ser Asp Tyr Lys Cys Asn  
 805 810 815

Leu Leu Tyr Thr Ser Leu Asp Arg Ile His Lys Asn Val Ser Ile Tyr  
 820 825 830

Asn Glu Arg Ile Glu Arg Thr Lys His Val Pro Gln Lys Lys Asn Asp  
 835 840 845

Asn Ile Asp Ile Arg Gly Ile Tyr Lys Ser Tyr Asn Phe Phe Lys Ser  
 850 855 860

Met Asn Met Met Asn Ser Leu Ser Lys Cys Tyr His Thr Lys Thr Cys  
 865 870 875 880

Asp Tyr Ser Asn Tyr Asp Phe Met Lys Asn Lys Met Ser Lys Lys Ala  
 885 890 895

Gln Asn Lys Leu Val Ser Lys Cys Ile Ser Lys Tyr Lys Lys Lys Ala  
 900 905 910

Ile Lys Lys Lys Glu Arg Lys Glu Thr Thr Thr Thr Lys Lys Lys Tyr  
 915 920 925

Ile Tyr Arg Lys Asn Glu Ile Ser Ile Ser Phe Asp Gly Asn Val Phe  
 930 935 940

Gly His Glu Asn Arg Lys Arg Thr Lys Glu Asn Asn Lys Ser Lys Glu  
 945 950 955 960

Ser Ala Tyr Thr Ser Lys Ser Arg Lys Asn Asn Lys Ile Lys Gly Glu  
 965 970 975

Glu Lys Lys Thr Lys Arg Ser Leu Cys Ser Tyr Lys Leu Arg Lys Met

287

Lys Arg Phe Asn Tyr Glu Lys Tyr Gly Ser Phe Leu Phe Asn Asn His  
 1365 1370 1375  
 Glu Glu Ile Ser Phe Ser Thr Ser Cys Ser Asn Leu His Lys Lys Asp  
 1380 1385 1390  
 Leu Gln Leu Arg Gly Met Asp Thr Ile Gly Lys Lys Ile Met Gly Gly  
 1395 1400 1405  
 Lys Lys Phe Ile Arg Asn Leu Tyr Asn Glu Lys His Lys Asn Leu Asn  
 1410 1415 1420  
 Ile Phe Gln Lys Asn Cys Ser His Ile Leu Leu Lys Lys Asn Thr Lys  
 1425 1430 1435 1440  
 Lys Asn Ile Leu Ser Asn Asp Ile Gln Leu Lys Ser Pro Lys Cys Tyr  
 1445 1450 1455  
 Ile Lys Tyr Asn Asn Asn Met Asp Thr Leu Phe Asn Tyr Glu Asp Asp  
 1460 1465 1470  
 Ser Asn Trp Ser Tyr Asn Ser Ser Ile Cys Tyr Asp Ile Ile Gln Val  
 1475 1480 1485  
 Ser Asp Glu Glu Glu Tyr Asp Asn Val Asn Ile Lys Asp Lys Leu Tyr  
 1490 1495 1500  
 Glu Tyr Asn Met Cys Thr Asp Ser Ser Arg Tyr Glu Arg Ile Val Asn  
 1505 1510 1515 1520  
 Tyr Glu Asn Ser Ile His Ser His Asn Pro Tyr Gly Thr Asn Ser Lys  
 1525 1530 1535  
 Tyr Glu Thr Phe Cys Asp Asp Ala Phe Pro Ser Gln Ile Cys Ser Ile  
 1540 1545 1550  
 His Asn Tyr Asn Lys Lys Gly Gly Arg Tyr Asn Phe Ser Lys Leu Tyr  
 1555 1560 1565  
 Lys Asn Lys Lys Asn Met Lys Ser Asn Met Asn Pro Ser Phe Ser Asp  
 1570 1575 1580  
 Leu Cys Ile Ile Asp Met Asp Met Ile Glu Ile Val Ser Lys Thr Lys  
 1585 1590 1595 1600  
 Phe Pro Gly Ile Asn Lys Ser Lys Ile Ile Cys Gly Thr Pro Pro Tyr  
 1605 1610 1615  
 Met Pro Pro Glu Ser Phe Asp Gly Ile Val Ser Pro Gly Asn Asp Ile  
 1620 1625 1630  
 Trp Ala Cys Gly Val Ile Leu Tyr Val Leu Met Asp Gly Arg Phe Pro  
 1635 1640 1645  
 Tyr Glu Ile Asn Asn Tyr Met Pro Ile His Leu Lys Lys Lys Ile Leu  
 1650 1655 1660  
 Met Glu Asn Lys Pro Lys Phe Glu Pro Phe Ile Trp Lys Gln His Thr  
 1665 1670 1675 1680  
 Asp Leu Leu Asp Leu Cys Leu Arg Leu Leu Asp Pro Asn Pro Trp Thr  
 1685 1690 1695  
 Arg Ile Gln Asn Ala Arg Glu Ala Leu Ile His Tyr Ser Phe Arg Asp  
 1700 1705 1710

Leu Ile

<210> 133  
 <211> 153  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 133  
 Met Ile Asn Thr Phe Gln Ile Arg Asp Phe Asn Lys Phe Pro Phe Ser  
           1                  5                  10                  15  
 Ser Asn Glu Gln Lys Ile Ile Ser His Phe Thr Asn Glu His Asn Asp  
                   20                  25                  30  
 Lys Phe Asn Asp Asn Leu Ser Gln Leu Gln Ile Pro Gln Glu Leu Lys  
                   35                  40                  45  
 Lys Asn Ile Ile Thr Asn Asn Leu His Asp Glu Lys Val Ile Leu Thr  
           50                  55                  60  
 Asp Asn Asn Met Lys Glu Lys Cys Asn His Ile Asp Arg Asp Thr Ile  
           65                  70                  75                  80  
 Thr Lys Glu Ile Ser Ile Glu Arg Leu Leu His Lys Ile Arg Asn Leu  
                   85                  90                  95  
 Glu Asn Glu Lys Lys Phe Leu Leu Arg Phe Leu Glu Asn Lys Lys Asn  
                   100                  105                  110  
 Ile Glu Leu Glu Tyr Lys Lys Ala Leu Glu Thr Gln Ala Ala Tyr Val  
                   115                  120                  125  
 Asn Ser Glu Asn Lys Lys Ser Gln Phe Tyr Glu Asn Glu Trp Leu Asn  
           130                  135                  140  
 Met Lys Ser Leu Glu Tyr Ser Leu Met  
           145                  150

<210> 134  
 <211> 1278  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 134  
 Met Ala Met Leu Leu Phe Phe Ser Ile Ile Ile Pro Phe Leu Lys Leu  
           1                  5                  10                  15  
 Leu Met Val Ser Asp Asn Phe Tyr Ser Phe Ile Val Leu Tyr Lys Met  
                   20                  25                  30  
 Asn Lys Lys Arg Glu Glu Glu Lys Arg Arg Arg Arg Arg Arg Ile Arg  
                   35                  40                  45  
 Ala Arg Glu Tyr Asn Asn Ala Lys Tyr Asn Lys Asn Arg Tyr Lys Met  
           50                  55                  60  
 Asn Lys Tyr Asn Arg Asn Lys Asn Ile Asn Asp Ile Tyr Lys Asp Asp  
           65                  70                  75                  80  
 Ile Tyr Tyr Ser Glu Asn Ile Phe Lys Asn Asp Glu Ile Asn Tyr Ile  
                   85                  90                  95  
 Asn Thr Ile Asn Glu Asn Glu Glu Phe Ile Leu Lys Lys Phe Lys Ile  
                   100                  105                  110  
 Leu Asn Phe Ile Ser Arg Phe Gln Phe Val Asp Val Phe Ile Ser Leu  
           115                  120                  125  
 Phe Ile Val Ser Ser Leu Asn Leu Tyr Leu Leu Glu Ala Arg Met Leu  
           130                  135                  140

Asn 145	Gly	Ala	Tyr	Tyr	Phe 150	Leu	Asn	Tyr	Cys	Met 155	Leu	Ser	Thr	Ile	Ser 160
Ser	Phe	Leu	Leu	Phe 165	Ser	Phe	Thr	Ser	Leu	Lys 170	Ile	His	Ile	Phe	Lys 175
Asn	Gly	Asn	Ile 180	Lys	Ile	Ser	Ala	Cys 185	Leu	Asn	Glu	Ser	Asn 190	Leu	Glu
Val	Thr	Thr 195	Ser	Gly	Pro	Leu	Ser 200	Thr	Lys	Asp	Leu	Val 205	Glu	Glu	Glu
Gly	His 210	Ala	Gln	Ile	Asn	Asn 215	Leu	Ile	Ile	Asn	Asp 220	Lys	Asn	Met	Thr
Ser 225	Gly	Val	Val	Asn	Asp 230	Phe	Ser	Gly	Asn	Gly 235	Asn	Asn	Val	Glu	Leu 240
Thr	Asp	Asp	Leu	Lys 245	Ser	Gly	Glu	Pro	Gln 250	Asn	Arg	Asp	Asp	Ile	Gln 255
Thr	Glu	Glu	Thr 260	Lys	Lys	Glu	Lys	Met 265	Asn	Thr	Arg	Thr	His 270	Asn	Asp
Glu	Asp	Asn	Thr 275	Lys	Lys	Lys	Asn 280	Ile	Lys	Asp	Lys	Lys 285	Lys	Ala	Asn
Gly	Asp 290	Asp	Lys	Val	Ile	Gln 295	Lys	Cys	Ile	Asp	Asn 300	Glu	Arg	Lys	Lys
Lys 305	Gln	Asn	Gly	Met	Ile 310	Gln	Ser	Val	Asn	Asp 315	Gly	Asp	Lys	Asn	Ser 320
Asn	Phe	Asn	Asn	Asn 325	Asn	Asn	Asn	Asn	Ile 330	Asn	Gly	Asp	Ser	Asn 335	Asn
Asn	Asn	Ile	Asn 340	Gly	Asp	Ser	Asn	Asn 345	Asn	Asn	Ile	Asn	Gly 350	Asp	Ser
Asn	Asn	Asn	Asn 355	Ile	Asn	Gly	Asp 360	Ser	Asn	Asn	Asn 365	Asn	Ile	Asn	Gly
Asp 370	Ser	Asn	Asn	Asn	Asn 375	Ile	Asn	Gly	Asp	Ser	Asn 380	Asn	Asn	Asn	Tyr
His 385	Asn	Asn	Tyr	His	Asn 390	Asn	Tyr	Arg	Asn	Asn 395	Tyr	His	Asn	Asn	Tyr 400
Arg	Asn	Asn	Asn	Cys 405	Arg	Asn	Asn	Ile	Leu 410	Glu	Gln	Asn	Lys	Cys 415	Asp
Lys	Asn	Val	Leu 420	Cys	Tyr	Asn	Asn	Ile 425	Tyr	Asn	Thr	Met	Lys 430	Asp	Asn
Asp	Thr	Tyr 435	Ile	Tyr	Leu	Lys	Lys 440	Asn	Lys	Phe	Asn	Ser 445	Leu	Leu	Lys
Ser 450	Asn	Cys	Ile	Lys	Thr	Asn 455	Phe	Asn	Met	Ile	Lys 460	Ile	Gly	Tyr	Val
Ile 465	Phe	Leu	Phe	Val	Leu 470	Leu	Cys	Leu	Cys	Ile 475	Tyr	Leu	Ile	Thr	Gly 480
Val	Glu	Cys	Ser	Leu 485	Phe	Gly	Ile	Tyr	Ile 490	Tyr	Leu	Ser	Tyr	Phe	Asn 495
Phe	Asn	Ile	Glu	Gly	Ile	Leu	Ile	Asp 505	Tyr	Met	Asp	Met	Leu	Asn	Ile 510

Leu	Lys	Leu	Lys	Ile	Lys	Lys	Gly	Tyr	Ile	Tyr	Pro	Phe	Phe	Val	Met
		515					520					525			
Leu	Pro	Phe	Ile	Phe	Pro	Val	Ile	Ile	Ser	Met	Cys	Phe	Phe	Leu	Ser
	530					535					540				
Val	Phe	Phe	Leu	Asn	Met	Tyr	Tyr	Glu	Ser	Phe	Ser	Lys	Leu	Tyr	Lys
545					550					555					560
Lys	Ile	Ser	Glu	Leu	Lys	Asn	Glu	Phe	Ile	Asn	Ser	Ser	Glu	Asn	Asp
				565					570					575	
Asn	Val	Asn	Glu	Arg	Ile	Leu	Val	Ser	Glu	Thr	Ser	Asn	His	Leu	Cys
			580					585					590		
Leu	Asn	Glu	Ser	Asn	Asp	Lys	Val	Ser	Asn	Thr	Ser	Asp	Asp	Phe	Leu
		595					600					605			
Ser	Arg	Asn	Asn	Ser	Asn	Ile	Ser	Ser	Ser	Lys	Ser	Glu	Met	Ile	Asn
	610					615					620				
Ser	Asn	Phe	Val	Phe	Asn	Lys	Leu	Leu	Asn	Phe	Tyr	Phe	Ser	Phe	Ala
625					630					635					640
Val	Phe	Phe	Ser	Tyr	Leu	Gly	Ser	Ala	Phe	Leu	His	Ile	Ser	Leu	Gly
				645					650					655	
Glu	Ile	Ile	Cys	Ile	Ala	Leu	Leu	Thr	Phe	Tyr	Gln	Ile	Val	Lys	His
			660					665					670		
Thr	Asn	Asn	Leu	Asn	Ile	Thr	Ile	Leu	Leu	Lys	Ser	Glu	Lys	Ile	Lys
		675					680					685			
Phe	Cys	Lys	Phe	Leu	Leu	Phe	Ile	Leu	Tyr	Gly	Leu	Leu	Cys	Phe	Ser
	690					695					700				
Ile	Asn	Leu	Tyr	Val	Asn	Gln	Trp	Glu	Glu	Tyr	Ile	Thr	Lys	Leu	Lys
705					710					715					720
Arg	Leu	Lys	Arg	Arg	Ile	Leu	Leu	Phe	Glu	Lys	Asn	Lys	Phe	Ser	Glu
				725					730					735	
Ile	Val	Asp	Leu	Asn	Thr	Gln	Lys	Gly	Asp	Gly	Asp	His	Phe	Asp	Glu
			740					745					750		
Thr	Gln	Ile	Phe	Ser	Ile	Phe	Phe	Ser	Phe	Leu	Ile	Lys	Lys	Asn	Glu
		755					760					765			
Gly	Ser	Lys	Met	Arg	Asp	Asn	Asp	Met	Asn	Ser	Asp	Ser	Glu	Asp	Ser
	770					775					780				
Ile	Tyr	Asp	Ala	Tyr	Glu	Gln	Gln	Ile	Gln	Leu	His	His	Gly	Asp	Asn
785					790					795					800
Met	Val	Asn	Gly	Met	Leu	Met	Met	Arg	Arg	Ile	Ser	Met	Gln	Asn	Leu
				805					810					815	
Glu	Asp	Asp	Glu	Thr	Gln	Val	Glu	Tyr	Ile	Asn	Arg	Glu	Ile	His	Thr
			820					825					830		
Gln	Gly	Asp	Leu	His	Val	Arg	Arg	Thr	Asn	Gln	Gly	Ile	Leu	Arg	Phe
		835					840					845			
Asn	Met	Arg	Arg	Gly	Lys	Lys	Gly	Ser	Asn	Glu	Asn	Met	Gly	Val	His
	850					855					860				
His	Glu	Ser	Gly	Asn	Val	Asp	Asp	Ala	Asn	Gly	Met	Asn	Asn	Val	Asp
865					870					875					880
Asp	Thr	Asn	Asn	Met	Asn	Asn	Val	Asp	Gly	Thr	Asn	Asn	Met	Asn	Asn

885										890					895				
Val	Asp	Gly	Thr 900	Asn	Asn	Met	Asn	Asn	Met	Asp	Gly	Arg	Asn 910	Asn	Met				
Asn	Asn	Ile 915	Asn	Ser	Val	Asp	Asn 920	Met	Asn	Asn	Leu	Asn 925	Asn	Asn	Asp				
Gly	Glu 930	Glu	Glu	Glu	Glu	Cys 935	Val	Asn	Asp	Val	Leu 940	Asn	Tyr	Asp	Asn				
Asn 945	Asn	Tyr	Ala	Ile	Asn 950	Glu	Asp	Ala	Glu	Glu 955	Tyr	Ile	Lys	Asn	Thr 960				
Ser	Gly	Glu	Arg	Ala 965	Val	Ile	Ile	Cys	Ser 970	Glu	Lys	Arg	Ile	Tyr 975	Glu				
Lys	Asn	Gly	Asn 980	Gly	Asp	Ile	Ile	Thr 985	Arg	Asn	Tyr	Lys	Asn 990	Glu	Glu				
Arg	Tyr	Ile 995	Tyr	Leu	Lys	Lys 1000	Trp	Ile	Pro	Phe	Lys 1005	Ser	Met	Ile	Leu				
Ser 1010	Lys	Leu	Glu	Lys	Arg	Lys 1015	Arg	Asn	Arg	Lys	Glu 1020	Ala	Tyr	Asn	Thr				
Pro 1025	Arg	Val	Leu	Ile 1030	Leu	Ile	His	Ser	Phe 1035	Leu	Phe	Ile	Leu	Ile	Val 1040				
Phe	Ile	Phe	Leu 1045	Met	Val	Phe	Phe	Lys 1050	Lys	Glu	Pro	Ile	Phe	Arg 1055	Phe				
Asn	Met	Pro 1060	Ser	Val	Asn	Lys	Arg 1065	Leu	Asn	Asn	Phe	Phe 1070	Lys	Ser	Thr				
Ser	Phe 1075	His	Glu	Ile	Ile	Pro 1080	Asn	Ser	Val	Gly	Lys 1085	Cys	Lys	Thr	Lys				
Lys 1090	Tyr	Ile	Ala	Lys	Glu 1095	Pro	Cys	Phe	Asn	Val 1100	Gly	His	Ile	Tyr	His				
Glu 1105	Glu	Lys	Thr	Phe 1110	Tyr	His	Ala	Thr	Leu 1115	Leu	Phe	Leu	Gln	Gly	Leu 1120				
Arg	Ser	Val	Lys 1125	Ile	Met	Asn	Met	Asn 1130	Phe	Tyr	Tyr	Glu	Lys 1135	Gly	Ile				
Tyr	Tyr	Leu 1140	Ser	Leu	Asp	Gly	Tyr 1145	Phe	Lys	His	Ile	Ile	Gly 1150	Pro	Leu				
Phe	Leu 1155	Lys	Leu	Cys	Leu	Gly 1160	Thr	Asn	Phe	Cys	Pro 1165	Ile	Ser	Thr	Tyr				
Ala 1170	Phe	Leu	Val	Gly	Ser 1175	Lys	Pro	Thr	Phe	Ser 1180	Val	Asn	Val	Ala	Val				
Gln 1185	Cys	Asn	Asn	Lys 1190	Lys	Pro	Pro	Tyr	Tyr 1195	Met	Thr	Asp	Ile	Ile	Val 1200				
Lys	Asp	Leu	Lys 1205	Ile	Thr	Lys	Ile	Glu 1210	Ile	Val	Lys	His	Ser 1215	Asp	Val				
Ile	Asp	Asn 1220	Val	Asp	Ile	Lys	Leu 1225	Asp	Asp	Val	Gln	Asp	Arg	Val	Gln				
Glu	Lys 1235	Val	Asn	Ala	Met	Leu 1240	Glu	Ala	Lys	Lys	Lys 1245	Ile	Ile	Val	Trp				
Lys 1250	Asn	Gln	Lys	Tyr	His 1255	Leu	Glu	Gly	Phe	Leu 1260	Asn	Tyr	Leu	Ile	Ser				



Lys Asn Ala Leu Ser Gly Phe Ser Cys Glu Pro Ile Asn Tyr  
 1265 1270 1275

<210> 135  
 <211> 665  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 135  
 Met Gln Tyr Phe Phe Leu Val Phe Leu Ala Val Leu Ala Lys Gly Phe  
 1 5 10 15  
 Leu Arg Asn Lys Glu His Ala Asn Leu Ile Asn Ser Tyr Asn Asp Ile  
 20 25 30  
 Val Glu Asp Ile Asn Ile Lys Lys Glu Glu Lys Ser Ser Ser Glu Pro  
 35 40 45  
 Pro Phe Ile Pro Ile Lys Asn Lys Ile Asp Asn Val His Thr Lys Asn  
 50 55 60  
 Asn Asn Gln Tyr Asn Leu His Asn Asn Lys Ser Asn Lys Thr His Leu  
 65 70 75 80  
 Thr Tyr Gly Thr His Thr Ser Phe Leu Gln Asn Cys Thr Ile Asn Asp  
 85 90 95  
 Cys Val Asp Val Asp Asn Lys Asp Ser Glu Ile Asn Asn Ile Thr Lys  
 100 105 110  
 Glu Lys Asp Asp Asn Asn Asn Asn Asn Gly Thr Lys Gln Ile Glu Glu  
 115 120 125  
 Lys Asn Lys Ile Asn Lys Ser Asp Leu His Arg Gln Asn Glu Leu Asn  
 130 135 140  
 Leu Gln Ser Gly Lys Asn Glu Gln Asp Ile Asn Lys Asn Glu Lys Gly  
 145 150 155 160  
 Lys Gln Asp Ile Ser Asn Ser Asn Ala Glu Asn Lys Lys Asp Val Lys  
 165 170 175  
 Glu Gly Val Lys Glu Leu Glu Glu Lys Lys Lys Glu Glu Lys Ile Ser  
 180 185 190  
 Asp Asp His Lys Val Glu Glu Asn Lys Lys Ser Asp Asp His Lys Val  
 195 200 205  
 Glu Glu Asn Lys Lys Ser Asp Asp His Lys Val Glu Glu Asn Lys Lys  
 210 215 220  
 Ser Asp Asp His Lys Ile Glu Glu Val Lys Lys Val Glu Glu His Glu  
 225 230 235 240  
 Glu Asp Glu Glu Glu Asp Lys Lys Glu Lys Lys Ser Glu Asn Lys Asn  
 245 250 255  
 Lys Asp Glu Asn Lys Asp Glu Asn Asp Glu Asp Asn Asp Glu Ile Ser  
 260 265 270  
 Asp Glu Asp Glu Val Asp Asp Asp Val Glu Glu Asp Lys Asn Glu Asn  
 275 280 285  
 Asp Asp Ile Asp Asp Asp Lys Lys Glu Thr Asp Lys Thr His Leu Glu  
 290 295 300  
 Glu Glu Glu Asn Glu Ile Ile Glu Lys Glu Phe Ser Asp Lys Lys Lys  
 305 310 315 320

Asn Gly Lys Asn Lys Asp Thr Lys Lys Glu Lys Ser Lys Asp Thr Glu  
 325 330 335  
 Lys Glu Lys Ser Lys Asp Ile Glu Lys Glu Lys Ser Lys Asp Lys Glu  
 340 345 350  
 Lys Glu Lys Ser Lys Asp Lys Glu Lys Glu Lys Gly Lys Asp Lys Glu  
 355 360 365  
 Lys Glu Lys Ser Lys Asp Ile Glu Lys Glu Lys Glu Lys Asp Lys Asp  
 370 375 380  
 Ile Glu Lys Glu Lys Ser Lys Asp Thr Ala Lys Glu Lys Glu Lys Asp  
 385 390 395 400  
 Lys Asp Ile Glu Lys Glu Lys Ser Lys Asp Met Glu Lys Leu Lys Asn  
 405 410 415  
 Lys Gln Asn Asp Glu Lys Lys Lys Asp Asp Asn Glu Lys Lys Lys Asn  
 420 425 430  
 Asp Lys Gln Asp Ile His Asp Asp Asn Asp Asp Glu Asn Asp Met Glu  
 435 440 445  
 Glu Ile Glu Glu Asn Asp Asp Glu Glu Asp Glu Asp Glu Asp Met Glu  
 450 455 460  
 Asn Lys Lys Lys Lys Lys Lys Gly Lys Asn Gly Asn Glu Asn Gly Asn  
 465 470 475 480  
 Glu Asn Gly Ser Glu Asn Gly Asn Glu Asn Gly Asn Glu Asn Gly Asn  
 485 490 495  
 Glu Asn Glu Asn Lys Asn Glu Ser Glu Asn Glu Asn Glu Asn Glu Asn  
 500 505 510  
 Glu Asn Glu Asn Gly Asn Glu Asn Glu Asn Glu Lys Glu Asn Glu Lys  
 515 520 525  
 Asp Lys Asn Ile Lys Glu Ile Glu Asn Val Thr Asn Ala Asn Lys Glu  
 530 535 540  
 Asn Tyr Glu Lys Ile Asn Lys Asn Ser Glu Ile Thr Ile Thr Lys Ser  
 545 550 555 560  
 Asn Ile Asp Ile Tyr Asn Asn Asn Arg Asn Asn Asp Ile Asp Lys Val  
 565 570 575  
 Asn Asn His Ile Phe Thr Asn Gln Gln Lys Lys His Asn Leu His Asn  
 580 585 590  
 Glu Gln Asn Lys Phe Asn Glu Thr Leu Asn Val Ser Thr Asn His Lys  
 595 600 605  
 Asn His Tyr Glu Glu Lys Lys Lys Tyr Glu Ser Asn Met Phe Asn Val  
 610 615 620  
 Asp Lys Arg Met His Lys Asn Leu Thr Ser Met Asp Thr Ile Leu His  
 625 630 635 640  
 Asn Leu Asn Asp Lys Leu Ser His His Lys Asp Leu Lys Asn Val Leu  
 645 650 655  
 Asn Asp Lys Lys Lys Lys Lys Lys Asn Lys  
 660 665

&lt;210&gt; 136

&lt;211&gt; 885

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 136

Met Leu Ile Tyr Asn Phe Phe Ile Val Leu Ile Tyr Ile Phe Gln Thr  
 1 5 10 15

Ala Ser Tyr Tyr Thr Lys Ser Leu Thr Gly Ser Ser Tyr Ser Glu Ile  
 20 25 30

Tyr Ser Lys Ser Leu Ser Asp Asp Glu Ser Asp Thr Tyr Gln Gly Lys  
 35 40 45

Asp Tyr Asp Asn Lys Ser Pro Tyr Tyr Ile Tyr Ser His Leu Leu Lys  
 50 55 60

Ile Ile Ile Lys Lys Asn Lys Phe Asn Gly Asp Lys Lys Leu Ile Tyr  
 65 70 75 80

Glu Tyr Ala Asn Gly His Pro Lys Ser Ser Tyr Thr Tyr Asp Thr Phe  
 85 90 95

Phe Asn Arg Val Leu Ser Phe Ser Asp Gly Leu Asn Thr Tyr Glu Gly  
 100 105 110

Thr Gly Ile Gln Val Lys Lys Tyr Asn Glu Glu Gln Asn Asn Gly Met  
 115 120 125

Phe Arg Leu Leu Gly Leu Tyr Gly Ser Asn Ser Ala Asn Trp Ile Thr  
 130 135 140

Ala Asp Ile Ser Cys Met Leu Ser Gly Val Thr Thr Val Val Met His  
 145 150 155 160

Ser Lys Phe Ile Leu Asn Glu Ile Val Asp Ile Leu Asn Glu Val Lys  
 165 170 175

Leu Glu Trp Leu Cys Leu Asp Leu Asp Phe Val Glu Asn Leu Leu Tyr  
 180 185 190

Leu Lys Ser Ser Leu Pro His Leu Lys Lys Leu Ile Ile Leu Asp Thr  
 195 200 205

Phe Ile Asn Pro Ser Ile Cys Asn Arg Lys Gly Gly Lys Ser Lys Asn  
 210 215 220

Gly Asp Glu Gly Gln Ala Val Gly Asn Asn Gly Glu Lys Glu Glu Lys  
 225 230 235 240

Glu Glu His Lys Gly Glu Ala Glu Glu Asp Asp Glu Asp Gly Glu Asp  
 245 250 255

Asp Glu Asp Asp Glu Asp Asp Glu Asp Gly Glu Asp Asp Glu Asp Asp  
 260 265 270

Glu Asp Gly Glu Asp Gly Glu Asp Asp Glu Asp Asp Glu Asp Gly Glu  
 275 280 285

Asp Gly Glu Asp Asp Asp Asp Asp Glu Lys Gly Asp Asn Ile Lys Asp  
 290 295 300

Asp Tyr Leu Tyr Lys Lys Gln Asn Glu Ile Pro Asn Glu Asn Ile Val  
 305 310 315 320

Glu Glu Gln Gly Glu Gly Glu Asp Gln Arg Asn Val His Gln Thr Val  
 325 330 335

Gln Pro Thr Pro Tyr Gly Ala Asn Thr Lys Gln Tyr Leu Lys Lys Lys  
 340 345 350

Lys Lys Lys Arg Thr Glu Asn Val Glu Glu Arg Lys Lys Ser Asn Met  
 355 360 365  
 Lys Arg Lys Glu Ser Lys Trp Ile Lys Lys His Met Tyr Pro Lys Leu  
 370 375 380  
 Ile Tyr Glu Asn Ile Asp Leu Glu Asp Ile Cys Glu Asp Glu Lys Lys  
 385 390 395 400  
 Lys Ile Glu Lys Leu Lys Tyr Leu Lys Glu Glu Ala Lys Lys Tyr Gly  
 405 410 415  
 Ile Gln Ile Ile Gln Phe Asn Glu Met Leu Ile Asn Lys Asn Asn Asn  
 420 425 430  
 Met Leu Thr Tyr Asn Ile Gln Asn Asp Lys Glu Asn Phe Ile Ser Thr  
 435 440 445  
 Ile Val Tyr Thr Ser Gly Thr Ser Gly Arg Pro Lys Gly Val Met Leu  
 450 455 460  
 Ser Asn Lys Asn Ile Tyr Tyr Met Val Ile Pro Leu Ser Lys His Ser  
 465 470 475 480  
 Ile Phe Thr Tyr Asn Val Asp Thr His Leu Ser Tyr Leu Pro Leu Ser  
 485 490 495  
 His Ile Tyr Glu Arg Ile Asn Ile Tyr Leu Cys Phe Val Leu Thr Val  
 500 505 510  
 Glu Ile His Ile Trp Ser Lys Asn Leu Lys Tyr Phe Ser Ser Asp Ile  
 515 520 525  
 Leu Val Ser Lys Ser Ser Phe Leu Ala Gly Val Pro Lys Val Phe Asn  
 530 535 540  
 Arg Ile Tyr Asn Asn Val Ile Thr Glu Ile Gly Lys Leu Pro Phe Leu  
 545 550 555 560  
 Lys Lys Phe Phe Val Glu Lys Ile Leu Ser Leu Lys Arg Ser Asn Met  
 565 570 575  
 Asn Gly Lys Phe Ser Lys Phe Ile Glu Ala Ile Thr Asn Ile Ser Lys  
 580 585 590  
 Lys Ile Arg Ser Lys Ile Asn Pro Asn Leu Asn Thr Phe Ile Thr Gly  
 595 600 605  
 Gly Gly Lys Thr Ser Pro Lys Val Ile Ser Glu Leu Ser Leu Leu Leu  
 610 615 620  
 Asn Val Ser Ile Gln Gln Gly Tyr Gly Leu Thr Glu Thr Thr Gly Pro  
 625 630 635 640  
 Leu Phe Val Gln His Arg Lys Asp Lys Asp Pro Glu Ser Thr Gly Gly  
 645 650 655  
 Pro Ile Ser Pro His Val Leu Tyr Lys Val Gln Ser Trp Glu Ile Tyr  
 660 665 670  
 Asn Ala Lys Asp Ser Leu Pro Arg Gly Glu Leu Leu Ile Lys Gly Asp  
 675 680 685  
 Cys Ile Phe His Gly Tyr Phe Val His Lys Asp Ile Thr Asp Asn Ser  
 690 695 700  
 Phe Thr Glu Asp Lys Phe Phe Lys Thr Gly Asp Ile Val Gln Ile Asn  
 705 710 715 720  
 Lys Asn Gly Ser Leu Thr Phe Leu Asp Arg Ser Lys Gly Leu Leu Lys

725 730 735  
 Leu Ala Gln Gly Glu Tyr Ile Gln Thr Asp Met Leu Asn Ser Leu Tyr  
 740 745 750  
 Ser Glu Ile Pro Phe Ile Asn His Cys Val Val Tyr Ala Asp Asp Thr  
 755 760 765  
 Leu Ser Gly Pro Ile Ala Val Val Ser Ile Asp Lys Glu Leu Phe Ile  
 770 775 780  
 Lys His Leu Leu Glu Asp Asn Ile Ile Ser Asp Val Gly Thr Val Glu  
 785 790 795  
 Glu Glu Phe Leu Glu Ala Ile Asp Asp Glu Gln Ile Asn Ser Asp Val  
 805 810 815  
 Tyr Val Asn Tyr Val Lys Gln Lys Met Leu Glu Ala Tyr Lys Lys Thr  
 820 825 830  
 Asn Leu Asn Gly Tyr Asn Ile Ile Asn His Ile Tyr Leu Thr Val Lys  
 835 840 845  
 Val Trp Asp Ile Ser Asn Tyr Ile Thr Pro Thr Phe Lys Ile Lys Arg  
 850 855 860  
 Phe His Val Phe Arg Asp Tyr Ala Phe Phe Ile Asp Asp Ile Lys Lys  
 865 870 875 880  
 Leu Tyr Ser Ser Lys  
 885

&lt;210&gt; 137

&lt;211&gt; 244

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 137

Met Lys Lys Lys Asn Asn Asn Lys Leu His Tyr Leu Asp Ser Lys Gly  
 1 5 10 15  
 Lys Leu Tyr Thr Ser Gly Leu Arg Ser Asp Thr Lys Glu Lys Tyr Gly  
 20 25 30  
 Glu Ile Pro Ser Ser Asn Lys Asn His Asn Leu Ile Glu Lys Tyr Asn  
 35 40 45  
 Glu Leu Gln Ser Leu Leu Ser Lys Glu Glu Glu Lys Tyr Asp Phe Val  
 50 55 60  
 Lys Asn Glu Leu Gly Asp Leu Gln Lys Gln Lys Asp Leu Leu Lys Trp  
 65 70 75 80  
 His Leu Cys Asn Asn Ile Lys Lys Leu Ser Met Lys Arg Ser Asp Tyr  
 85 90 95  
 Lys Phe Lys Thr Glu Thr Lys Ser Lys Leu Glu Ser Lys Leu Lys Ser  
 100 105 110  
 Leu Lys Asp Met Asn Lys Ile His Lys Phe Glu His Asp Thr Leu Glu  
 115 120 125  
 Glu Leu Val His Lys Met Glu Gln Glu Leu Glu Thr Lys Met Tyr Ile  
 130 135 140  
 Lys Asn Asp Ile Glu Asn Ile Phe Asn Glu Cys Ile Asn Lys Lys Asp  
 145 150 155 160  
 Glu Tyr Leu Lys Asp Ile Thr Gln Glu Arg Ile Ser Val Phe Lys Glu

165								170					175			
Arg	Ile	Phe	Asn 180	Asp	Cys	Glu	Glu	Cys 185	Gln	Glu	Ile	Thr	Thr 190	Leu	Asn	
Asn	Met	Lys 195	Glu	Cys	Ile	Val	Asn 200	Met	Cys	Asn	Tyr	Asn 205	Phe	Asn	Ser	
Cys	Lys 210	Ile	Ile	Ser	Leu	Leu 215	Phe	Tyr	Asn	Arg	Ile 220	Leu	Lys	Cys	Val	
Ile 225	Phe	Lys	Asn	Lys	Met 230	Asn	Leu	Ile	His	Phe 235	Tyr	Asp	Glu	Leu	Leu 240	
Gln	Tyr	Leu	Met	Leu 245	Asn	Asn	Lys	Met	Asp 250	Ile	Leu	Lys	Glu	Phe 255	Lys	
Lys	Tyr	Met	Asn 260	Leu	Ile	Ile	Gln	Asp 265	Gly	Tyr	Thr	Cys	Ala 270	Tyr	Tyr	
Lys	Asp	Lys 275	Asn	Ile	Ile	Asn	Asp 280	Leu	Leu	Gln	Met	Val 285	His	Val	Trp	
Lys	Lys 290	Leu	Leu	Ile	Asn	Asp 295	Met	Gln	Glu	Thr	Lys 300	Glu	Leu	Leu	Asn	
Ile 305	Phe	His	Tyr	Asp	Asn 310	Arg	Thr	Asp	Glu	Asn 315	Ile	Lys	Asn	Tyr	Glu 320	
Gly	Pro	Leu	Tyr	Asn 325	Asn	His	His	Asn	Asn 330	His	Asn	Asn	His	Ser 335	Asn	
His	Asn	Asn	His 340	Ile	Asn	His	Asn	Asn 345	His	Ser	Asn	His	Asn 350	Asn	His	
Asn	Asn	His 355	Asn	Asn	His	Asn	Asn 360	His	Ser	Asn	His	Ser 365	Asn	His	Asn	
Asn	Arg 370	Asn	His	Asn	Tyr	Tyr 375	Asn	Asn	Tyr	Tyr	Leu 380	Tyr	Thr	Asn	Tyr	
Gln 385	Lys	His	Lys	Asn	Asn 390	Lys	Ile	Pro	Pro	Pro 395	Pro	Ser	Gly	Pro	Pro 400	
Pro	Asn	Asn	Ile	Lys 405	Tyr	Asn	Asn	Val	His 410	Pro	Asn	Asn	Tyr	Asn 415	Pro	
Pro	Pro	Pro	Pro 420	Pro	Gly	Thr	Leu	Gln 425	Thr	Phe	Asn	Thr	Asn 430	Asp	Ser	
Phe	Lys	Gly 435	Leu	Ser	Ser	Tyr	Asp 440	Asn	Asn	Arg	Gln	Glu 445	His	Ile	Asp	
Asp	Phe 450	Lys	His	Asn	Phe	Asn 455	Ser	Asn	Ile	Asn	Ile 460	Asn	His	Ser	Met	
Glu 465	Tyr	Lys	Asp	Thr	Trp 470	Lys	Asn	Pro	Glu	Asn 475	Ile	Thr	Val	Gly	Phe 480	
Leu	Ala	Thr	Ile	Leu 485	Lys	Met	Ile	Ser	Lys 490	Lys	Val	Lys	Lys	Leu 495	Gln	
Asn	Pro	Leu	Ile 500	Pro	Tyr	Thr	Pro	Ile 505	Asp	Thr	Ser	Tyr	Ala 510	Tyr	Gln	
Thr	Pro	Pro 515	Ser	Val	His	Val	Ser 520	Gln	Lys	Met	Asn	Glu 525	Lys	Ile	Asp	
Glu	Phe 530	Tyr	Asp	Glu	Leu	Ser 535	Phe	Ile	Leu	Asn	Asn 540	Glu	Glu	Val	Gln	

245										250					255				
Ala	Glu	Tyr	Asp	Val	Glu	Lys	Leu	Glu	Lys	Ile	Lys	Asp	Leu	Lys	Glu				
			260						265					270					
Arg	Ser	Lys	Asn	Val	Gly	Ile	Arg	Phe	Leu	Glu	Phe	Asp	Asp	Val	Ser				
		275					280					285							
Ser	Val	Pro	Thr	Lys	Ile	Tyr	Asn	Ile	Gln	Asn	Asp	Glu	Pro	Asp	Phe				
	290					295					300								
Ile	Thr	Ser	Ile	Val	Tyr	Thr	Ser	Gly	Thr	Ser	Gly	Lys	Pro	Lys	Gly				
305					310					315					320				
Val	Met	Leu	Ser	Asn	Leu	Asn	Met	Tyr	Asn	Ala	Ile	Val	Pro	Leu	Cys				
				325					330						335				
Lys	His	Ser	Met	Leu	Asn	Tyr	His	Pro	Lys	Ala	His	Leu	Ser	Tyr	Leu				
			340					345					350						
Pro	Val	Ser	His	Ile	Tyr	Glu	Arg	Val	Asn	Val	Tyr	Val	Ala	Phe	Leu				
		355					360					365							
Ser	Gly	Ile	Lys	Ile	Asp	Ile	Trp	Ser	Lys	Asn	Ile	Asn	Phe	Phe	Ser				
	370					375					380								
Arg	Asp	Ile	Phe	Asn	Ser	Lys	Gly	Glu	Leu	Leu	Val	Gly	Val	Pro	Lys				
385					390					395					400				
Val	Phe	Asn	Arg	Ile	Tyr	Ser	Asn	Ile	Met	Ala	Glu	Ile	Asn	Asn	Leu				
				405					410					415					
Ser	Ala	Thr	Lys	Arg	Arg	Asn	Ile	Lys	Asn	Val	Phe	Ser	Leu	Arg	Arg				
			420					425					430						
Ser	Val	Asn	Cys	Ala	Cys	Phe	Thr	Asn	Leu	Leu	Glu	Gly	Leu	Thr	Gly				
		435					440					445							
Tyr	Ser	Ser	Lys	Ile	Arg	Asn	Cys	Val	Asn	Pro	Asn	Leu	Glu	Val	Ile				
	450					455					460								
Leu	Asn	Gly	Gly	Gly	Lys	Leu	Ser	Pro	Arg	Ile	Ala	Glu	Glu	Leu	Arg				
465					470					475					480				
Val	Leu	Leu	Asn	Val	Asn	Phe	Tyr	Gln	Gly	Tyr	Gly	Leu	Thr	Glu	Thr				
			485						490					495					
Thr	Gly	Pro	Ile	Phe	Val	Gln	Gln	Lys	Arg	Asp	Tyr	Asn	Thr	Glu	Ser				
			500					505					510						
Ile	Gly	Gly	Pro	Ile	Ala	Pro	Asn	Thr	Lys	Tyr	Lys	Val	Arg	Thr	Trp				
		515					520					525							
Glu	Thr	Tyr	Lys	Ala	Ser	Asp	Ser	Thr	Pro	Lys	Gly	Glu	Leu	Leu	Ile				
	530					535					540								
Lys	Ser	Asp	Ser	Ile	Phe	Lys	Gly	Tyr	Phe	Leu	Glu	Arg	Glu	Leu	Thr				
545					550					555					560				
Glu	Asn	Ser	Phe	Thr	Tyr	Asp	His	Phe	Phe	Val	Thr	Gly	Asp	Ile	Val				
				565					570					575					
Gln	Ile	Asn	Asp	Asn	Gly	Ser	Leu	Thr	Phe	Leu	Asp	Arg	Ser	Lys	Gly				
				580				585					590						
Leu	Val	Lys	Leu	Ser	Gln	Gly	Glu	Tyr	Ile	Glu	Thr	Asp	Leu	Leu	Asn				
		595					600					605							
Asn	Ile	Tyr	Ser	Glu	Ile	Pro	Phe	Ile	Asn	Asn	Cys	Val	Val	Tyr	Gly				
	610					615					620								

Asp Asp Ser Leu Asp Glu Ala Leu Ala Ile Ile Ser Val Asp Lys Tyr  
 625 630 635 640  
 Leu Leu Phe Arg Cys Leu Arg Asp Asp Asn Met Leu Asn Glu Thr Gly  
 645 650 655  
 Ile Asn Glu Lys Asn Tyr Met Asp Lys Leu Ser Asp Gln Asn Ile Asn  
 660 665 670  
 Thr Lys His Phe Ile Asp Tyr Val Lys Asn Lys Met Leu Glu Val Tyr  
 675 680 685  
 Asn Asn Thr Asn Leu Asn Arg Tyr Asn Ile Ile Asn His Ile Tyr Leu  
 690 695 700  
 Thr Ser Lys Thr Trp Asp Thr Thr Asn Tyr Leu Thr Pro Thr Met Lys  
 705 710 715 720  
 Val Lys Arg Phe Ser Val Ile Gln Asp Tyr Ala Phe Phe Ile Asp Gln  
 725 730 735  
 Val Lys Asn Ile Phe Lys Lys Lys Leu Lys Gly Gln Lys Glu Arg Thr  
 740 745 750  
 Lys Arg Leu Gln Lys Lys Thr Ser Asp Glu Gln Glu Ile Lys Asn Asp  
 755 760 765  
 Glu Asn Asp Gln Glu Lys Ser Lys Lys Ser Tyr Phe Ser Arg Leu Ser  
 770 775 780  
 Gln Lys Arg Lys Ser Arg Ser Gln Glu Lys Asn Lys Ser Thr Ser Gln  
 785 790 795 800  
 Glu Lys Asn Lys Ser Thr Ser Gln Glu Lys Asn Lys Ser Lys Ser Lys  
 805 810 815  
 Glu Lys Asn Thr Ser Thr Leu Pro Gln Asp Asn Ile Ser Ile Pro Val  
 820 825 830  
 Gln Asn Lys Ile Glu Lys Pro Gln Gln Asn Asn Met Ser Asn Ile Thr  
 835 840 845  
 Leu Lys Asn Thr Leu Lys Ser Thr Asp Ala Ser Leu Lys Ile Pro Glu  
 850 855 860  
 Lys Asn Lys Val Gln Thr Asn Lys Ser Arg Phe Gln Val Gln Asn Val  
 865 870 875 880  
 Arg Glu Glu Leu Glu Met Asn Ser  
 885

&lt;210&gt; 139

&lt;211&gt; 972

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 139

Met Ser Asp Lys Gln Ser Lys Lys Asn Lys Asn Ser Lys Lys Asn Lys  
 1 5 10 15  
 Asn Asn Lys Ser Asp Lys Asn Asp Ile Asn Ser Lys Asn Lys Lys Asn  
 20 25 30  
 Asn Asp Asn Asn Lys Thr Asn Asp Asn Tyr Cys Asn Gln Val Ile Asp  
 35 40 45  
 Asn Thr Asn Asp Glu Val Ile Glu Thr Pro Glu Gln Asn Asp Asn Ile  
 50 55 60



Lys Lys Glu Asn Pro Ser Ser Asn Asn Asn Asn Asn Asn Asn Lys Asp  
 65 70 75 80  
 Asp Ala Ile Cys Asn Asn Asn Lys Asp Asp Thr Ile Cys Asn Asn Lys  
 85 90 95  
 Asp Asp Thr Ile Cys Asn Asn Asn Lys Asp Asp Thr Ile Cys Asn Asn  
 100 105 110  
 Lys Asp Asp Thr Ile Cys Asn Asn Asn Lys Asp Asp Ile Ile Cys Asn  
 115 120 125  
 Asn Lys Asp Asp Thr Met Cys Asn Asn Lys Asp Asp Thr Ile Cys Asn  
 130 135 140  
 Asn Lys Asp Asp Thr Ile Cys Asn Asn Lys Asp Asp Ile Ile Cys Asn  
 145 150 155 160  
 Asn Lys Asp Asp Ile Ile Cys Asn Asn Asn Asp Asp Thr Ile Cys Asn  
 165 170 175  
 Asn Lys Asp Asp Thr Ile Cys Asn Asn Asn Asp Asp Thr Ile Cys Asn  
 180 185 190  
 Asn Asn Asp Asp Thr Ile Cys Asn Asn Asn Asp Asp Thr Ile Cys Asn  
 195 200 205  
 Asn Asn Asp Asp Thr Ile Cys Asn Asn Lys Asp Asp Leu Met Asn Asp  
 210 215 220  
 Lys Asn Glu Lys Pro Leu Asn Asn Gly Asp Lys Glu Asp Pro Leu Asn  
 225 230 235 240  
 Asn Asn Glu Ser Asn Asn Met Asp Lys Asn Lys Asn Asp Glu Glu Gly  
 245 250 255  
 Ser Ser Cys Leu Ser Ser Leu Gln Asn Glu Gly Val Asp Ile Asn Gln  
 260 265 270  
 Thr Lys Asp Tyr Lys Glu Lys Lys Arg Val Ser Asp Ala Ser Asp Ile  
 275 280 285  
 Tyr Ala Arg Thr Asp Ser Val Asn Ser Asn Leu Ile Lys Ile Ser Gln  
 290 295 300  
 Ser Ser Glu Glu Trp Glu Pro Gln Asn Lys Trp Thr Leu Ser Val Leu  
 305 310 315 320  
 Phe Gln Asn Ile Lys Ser Ile Val Val Lys Asn Tyr Ile Phe Val Ala  
 325 330 335  
 Lys Lys Cys Gly Ile Pro Asn Gln Pro Asn Lys Pro Gly Pro Val Leu  
 340 345 350  
 Ala Ile Ser Ile Glu Lys Ala Asn Asn Asn Asp Ser Asp Asn Ile Ile  
 355 360 365  
 Val Gln Thr Pro Cys Ala Tyr Glu Lys Tyr Ser Leu Arg Gly Lys Leu  
 370 375 380  
 Ile Gln His Lys Ser Leu Tyr Pro Cys Thr Ile Thr Cys Met Met Asn  
 385 390 395 400  
 Gly Ser Ile Gly Gly Ile Gly Lys Val Val Ile Leu Gly Glu Gln Asn  
 405 410 415  
 Gly Asn Val Leu Ile Tyr Lys Ile Asp Lys Phe Glu Cys Ile Leu Lys  
 420 425 430

Leu	Asn	Thr	Lys	Glu	Cys	Leu	Lys	Lys	Tyr	Phe	Asn	Asn	Asn	Pro	Thr
		435					440					445			
Thr	Arg	Arg	Lys	Ser	Ile	Asn	Asn	Tyr	Met	Asp	Phe	Lys	Glu	Lys	Val
	450					455					460				
Val	Asn	Tyr	Tyr	His	His	Pro	Ser	Asn	Asp	Lys	Glu	Gln	Gln	Lys	Gln
465					470					475					480
Ser	Thr	Gln	Tyr	Asn	His	Asn	Lys	His	Asn	Asn	Asn	Phe	Ile	Asn	Asn
				485					490					495	
Leu	Asp	Pro	Ser	Gln	Thr	Asn	His	Asn	Asn	Pro	Tyr	Asp	Asp	Asn	Asp
			500					505					510		
Leu	Ser	Tyr	Gln	Ile	Ser	Gly	Ile	Ser	Val	Lys	Ser	Thr	Phe	Ala	Asn
		515					520					525			
Phe	Ile	His	Trp	Ile	Ile	Ala	Gly	Asn	Met	Lys	Gly	Tyr	Ile	Phe	Val
	530					535					540				
Trp	Glu	Val	Pro	Ser	Gly	Asn	Ile	Ile	Lys	Ile	Leu	Leu	Pro	Pro	Leu
545					550					555					560
Tyr	Phe	Phe	Asn	Glu	Ala	Lys	Arg	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
				565					570					575	
Lys	Arg	Lys	Asn	Tyr	Asn	Asn	Pro	Asn	Tyr	Pro	Tyr	Ser	Ser	Ser	Ser
			580					585					590		
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Phe	Ser
		595					600					605			
Ser	Ser	Ser	Val	Ser	Ser	Tyr	Tyr	Ser	Asp	Asp	Phe	Tyr	Tyr	Ala	Ser
	610					615					620				
Asn	Gly	Glu	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Arg	Lys	Lys	Lys	Lys	Thr
625					630					635					640
Asn	Thr	Asn	Lys	Asn	Lys	Asn	Lys	Asn	Ile	Asn	Ile	Asn	Glu	Ile	Lys
				645					650					655	
Lys	Asn	Thr	Asn	Glu	Val	Gln	Asn	Gln	Asn	Lys	Gln	Asn	Tyr	Asn	Gly
			660					665					670		
Thr	Gln	Asn	Asn	Leu	Ser	Ile	Ser	His	Asp	Thr	Pro	Asn	Ser	Ile	Asn
		675					680					685			
Val	Asn	Glu	Lys	Leu	Glu	Lys	Arg	Glu	Glu	Val	Asn	Lys	Gln	Asn	Asn
		690				695					700				
Gly	Phe	Thr	Asn	Ser	Asn	Glu	Gln	Asn	Ser	Thr	Tyr	Asn	Ser	Asp	Asp
705					710					715					720
Asn	Ser	Tyr	Asn	Asn	Ser	Asp	Glu	Ser	Ser	Asp	Asp	Asn	Ser	Asp	Tyr
				725					730					735	
Cys	Ser	Asp	Asp	Leu	Tyr	Ser	Asp	Glu	Tyr	Ser	Glu	Ser	Asp	Thr	Ser
			740					745					750		
Pro	Asn	Asn	Ser	Thr	Asn	Glu	Ser	Tyr	Asp	Thr	Asn	Ser	Ile	His	Asn
			755				760					765			
Lys	Arg	Lys	Lys	Asn	Lys	Lys	Asn	Thr	Tyr	Asn	Asp	Ile	Ser	Asn	Lys
	770					775					780				
Cys	Tyr	Val	Ser	Ala	Ile	Leu	Ala	Val	Thr	His	Lys	Tyr	Glu	Leu	Trp
785					790					795					800
Val	Ala	Phe	Gly	Asn	Gly	Tyr	Ile	Ala	Val	Tyr	Asp	Leu	Tyr	Asp	Phe

805								810				815			
Gln	Leu	Leu	Leu	Tyr	Thr	Cys	Ile	Ser	Lys	Ser	Pro	Ile	Met	Asp	Leu
			820					825					830		
Lys	Tyr	Ser	Lys	Ile	Leu	Glu	Asp	Val	Leu	Ile	Leu	Ile	Gly	Asn	Asn
		835					840					845			
Tyr	Leu	Ser	Val	Trp	Asp	Thr	Lys	Thr	Leu	Lys	Gln	Val	Arg	Lys	Ile
	850					855					860				
Pro	Thr	Ser	Gln	Ile	Thr	Ser	Lys	Asn	Ser	Ser	Leu	Ser	Thr	Ile	Tyr
865					870					875					880
Leu	Leu	Glu	Ser	Pro	Asn	Ser	Trp	Lys	Tyr	Lys	Gln	Val	Val	Leu	Ile
				885					890					895	
Ala	Gly	Cys	Asn	Asn	Gly	Ser	Val	Cys	Leu	Thr	Asn	Ile	Thr	Lys	Lys
			900					905					910		
Val	Asp	Gly	Asp	Leu	Thr	Phe	Ser	Tyr	Ile	Lys	Thr	Tyr	Asn	Lys	His
		915					920					925			
Phe	Glu	Pro	Tyr	Val	Pro	Ile	Ser	Tyr	Ile	Tyr	Ile	Glu	Pro	Thr	Ile
	930					935					940				
Asn	Ala	Ala	Phe	Val	Gly	Asp	Ala	Ser	Gly	Val	Val	Phe	Thr	Leu	Pro
945					950					955					960
Arg	Ile	Leu	Ser	Thr	Leu	Lys	Asn	Asn	Asp	Ser	Ser				
				965					970						

&lt;210&gt; 140

&lt;211&gt; 764

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 140

Met	Arg	Asp	Lys	Glu	Asp	His	Pro	Asn	Val	Gln	Lys	Asn	Lys	Phe	Ser
1				5					10					15	
Tyr	Asp	Gly	Tyr	Asp	Asp	Lys	Tyr	Ser	Tyr	Asp	Gln	Asn	Tyr	Tyr	Asn
			20					25					30		
Asn	Leu	Asn	Asn	Met	Met	Thr	Asp	Ile	Lys	Thr	Lys	Lys	Lys	Lys	Tyr
		35					40					45			
Met	Pro	Pro	Ser	Ser	Asn	Phe	Pro	His	Ile	Val	Asn	Asn	Lys	Asn	Gly
	50					55					60				
Asn	Thr	Tyr	Thr	Lys	His	Asn	Tyr	Asn	Asn	Lys	Asp	Glu	Tyr	Ile	Ser
	65				70					75					80
Gly	Tyr	Asp	Ile	Lys	Tyr	Asn	Asn	His	Gly	Asp	Lys	Tyr	Gly	Ser	Asn
				85					90					95	
Thr	Thr	Tyr	His	Asn	Asn	Asn	Ser	Asp	Asn	Asn	Asn	Asn	Asn	Asn	Asn
			100					105					110		
Asn	Asn	Asn	Asn	Asn	Met	Tyr	Asn	Pro	Asn	Tyr	Tyr	Cys	Thr	Asn	Tyr
			115				120					125			
Glu	Asp	Arg	Cys	Tyr	Asn	Asn	Val	Ser	Asn	Ile	Gln	Asn	Lys	Val	Asn
	130						135				140				
Ile	Thr	Lys	Asn	Asp	Asp	Asp	Asp	Glu	Ile	Cys	Glu	Asn	Leu	Asn	Asp
145					150					155					160
Lys	His	Val	Asn	Asp	Pro	Leu	Asn	Val	Glu	Glu	Lys	Lys	Met	Leu	Glu

165										170					175				
Arg	Ile	Phe	Asn	Asp	Cys	Glu	Glu	Cys	Gln	Glu	Ile	Thr	Thr	Leu	Asn				
			180					185					190						
Asn	Met	Lys	Glu	Cys	Ile	Val	Asn	Met	Cys	Asn	Tyr	Asn	Phe	Asn	Ser				
		195					200					205							
Cys	Lys	Ile	Ile	Ser	Leu	Leu	Phe	Tyr	Asn	Arg	Ile	Leu	Lys	Cys	Val				
	210					215					220								
Ile	Phe	Lys	Asn	Lys	Met	Asn	Leu	Ile	His	Phe	Tyr	Asp	Glu	Leu	Leu				
225					230					235					240				
Gln	Tyr	Leu	Met	Leu	Asn	Asn	Lys	Met	Asp	Ile	Leu	Lys	Glu	Phe	Lys				
				245					250					255					
Lys	Tyr	Met	Asn	Leu	Ile	Ile	Gln	Asp	Gly	Tyr	Thr	Cys	Ala	Tyr	Tyr				
			260					265					270						
Lys	Asp	Lys	Asn	Ile	Ile	Asn	Asp	Leu	Leu	Gln	Met	Val	His	Val	Trp				
		275					280					285							
Lys	Lys	Leu	Leu	Ile	Asn	Asp	Met	Gln	Glu	Thr	Lys	Glu	Leu	Leu	Asn				
	290					295					300								
Ile	Phe	His	Tyr	Asp	Asn	Arg	Thr	Asp	Glu	Asn	Ile	Lys	Asn	Tyr	Glu				
305					310					315					320				
Gly	Pro	Leu	Tyr	Asn	Asn	His	His	Asn	Asn	His	Asn	Asn	His	Ser	Asn				
				325					330					335					
His	Asn	Asn	His	Ile	Asn	His	Asn	Asn	His	Ser	Asn	His	Asn	Asn	His				
			340					345					350						
Asn	Asn	His	Asn	Asn	His	Asn	Asn	His	Ser	Asn	His	Ser	Asn	His	Asn				
		355					360					365							
Asn	Arg	Asn	His	Asn	Tyr	Tyr	Asn	Asn	Tyr	Tyr	Leu	Tyr	Thr	Asn	Tyr				
	370					375					380								
Gln	Lys	His	Lys	Asn	Asn	Lys	Ile	Pro	Pro	Pro	Pro	Ser	Gly	Pro	Pro				
385					390					395					400				
Pro	Asn	Asn	Ile	Lys	Tyr	Asn	Asn	Val	His	Pro	Asn	Asn	Tyr	Asn	Pro				
				405					410					415					
Pro	Pro	Pro	Pro	Pro	Gly	Thr	Leu	Gln	Thr	Phe	Asn	Thr	Asn	Asp	Ser				
				420				425					430						
Phe	Lys	Gly	Leu	Ser	Ser	Tyr	Asp	Asn	Asn	Arg	Gln	Glu	His	Ile	Asp				
		435					440					445							
Asp	Phe	Lys	His	Asn	Phe	Asn	Ser	Asn	Ile	Asn	Ile	Asn	His	Ser	Met				
	450					455					460								
Glu	Tyr	Lys	Asp	Thr	Trp	Lys	Asn	Pro	Glu	Asn	Ile	Thr	Val	Gly	Phe				
465					470					475					480				
Leu	Ala	Thr	Ile	Leu	Lys	Met	Ile	Ser	Lys	Lys	Val	Lys	Lys	Leu	Gln				
				485					490					495					
Asn	Pro	Leu	Ile	Pro	Tyr	Thr	Pro	Ile	Asp	Thr	Ser	Tyr	Ala	Tyr	Gln				
			500					505					510						
Thr	Pro	Pro	Ser	Val	His	Val	Ser	Gln	Lys	Met	Asn	Glu	Lys	Ile	Asp				
		515					520					525							
Glu	Phe	Tyr	Asp	Glu	Leu	Ser	Phe	Ile	Leu	Asn	Asn	Glu	Glu	Val	Gln				
	530					535					540								

Ser Thr Asp Ile Ser Asp Thr Asn Asp Ile Asn Asp Val Tyr Glu Ser  
 545 550 555 560  
 Tyr Lys Lys Leu Thr Gly Glu His Lys Lys Gly Lys Lys Lys Asn Thr  
 565 570 575  
 Lys His Arg Asn Asn Asp Asn Asp Asn Gly Asn Gly Asn Gly Asn Gly  
 580 585 590  
 Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly  
 595 600 605  
 Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly  
 610 615 620  
 Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Gly Asn Asp Asn Asn  
 625 630 635 640  
 Asn Asn Asn Ile Lys Asp Asn Asn Phe Glu Tyr Glu Lys Lys Asp Glu  
 645 650 655  
 Asn Tyr Phe Ser Ser Asp Thr Asn Thr Thr Phe Ser Ser Leu Glu Ile  
 660 665 670  
 Leu Asp Asp Asn Met Leu Asp Leu Leu Val Asp Thr Asn Lys Leu Cys  
 675 680 685  
 Lys Asn Lys Lys Arg Lys Lys Ser Lys Asn Val Asn Phe Asn Gln Ile  
 690 695 700  
 Ala Ile Glu Asn Ser Gln Asn Trp Ser Glu Thr Gln Asn Tyr Asn Ser  
 705 710 715 720  
 Leu Asn Tyr Met Asp Ile Tyr Ser Ala Pro Asn Asn Thr Asn Asp Val  
 725 730 735  
 Phe Glu Asn Tyr Arg Arg Asn Lys Ala Tyr Val Tyr His Glu Thr Ile  
 740 745 750  
 Ala Gln Lys Phe Tyr Asp Leu Lys Phe Lys Asp Thr  
 755 760

<210> 141  
 <211> 403  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 141  
 Met Asp Lys Asn Thr Leu Lys Arg Arg Ser Arg Leu Leu Gln Lys Asn  
 1 5 10 15  
 Glu Ala Arg Met Ser Met Leu Leu Gly Arg Asn Leu Asp Asp Glu Ile  
 20 25 30  
 Ser Lys Glu Lys Lys Glu Ser Asn Lys Asn Asp Lys His Lys Lys Asn  
 35 40 45  
 Asp Gln His Lys Lys Asn Asp Lys Ser Asn Gln Asn Gly Glu Asp Asn  
 50 55 60  
 Gln Asn Gly Glu Asp Asn Gln Asn Asp Glu Ser Asn Gln Asn Asp Glu  
 65 70 75 80  
 His Lys Lys Asn Asp Glu His Lys Lys Asn Asp Glu His Asn Gln Asn  
 85 90 95  
 Asp Glu His Asn Gln Asn Asp Glu His Asn Gln Asn Asp Glu His Asn  
 100 105 110

Gln Asn Asp Glu His Asn Gln Asn Asp Glu His Asn Gln Asn Asp Glu  
 115 120 125  
 His Asn Gln Asn Asp Glu His Asn Gln Asn Asp Glu Ser Asn Gln Asn  
 130 135 140  
 Asp Lys Asn Arg Lys Glu Ile Pro Pro Lys Glu Glu Lys Asp Lys Glu  
 145 150 155 160  
 Asn Asn Pro Ser Val Val Met Glu Asn Asn Asn Asn Ile Arg Lys Asp  
 165 170 175  
 Gln Asp Asn Lys Thr Ser Glu His Lys Ser Ser Thr Asn Ile Tyr Asn  
 180 185 190  
 Lys Asp Lys Asn Asn Asp Tyr Asn Lys Leu Leu Asp Lys Asp Asp Asn  
 195 200 205  
 Asn Asn Asn Asn Lys Asn Ile Asn Lys Asn Asp Glu Asn Asp Phe Thr  
 210 215 220  
 Ser Ile Asn Asn Asp Ile Pro Asn Lys Asn Lys Ile Thr Ser Gln Phe  
 225 230 235 240  
 Ile Ile Thr Lys His Glu Lys Leu His Phe Ile Ile Leu Ile Ile Leu  
 245 250 255  
 Cys Ile Phe Ile Ser Ile Phe Lys Val Tyr Tyr Asn Asn Lys Asn Asn  
 260 265 270  
 Leu Ile Tyr Lys Lys Lys Lys Lys Gly Asn Asn Asn Leu Asn Ile Val  
 275 280 285  
 Gln Met Ile Phe Phe Asn Phe Ile Asn Ser Pro Asn Phe Phe Phe Ser  
 290 295 300  
 Phe Ser Val Phe Tyr Asn Ile Leu Phe Leu Leu Ile Ile Met Leu Met  
 305 310 315 320  
 Tyr Ile Lys Lys Asn Asn Ile Thr Arg Lys Arg Ile Gln Asp Phe Phe  
 325 330 335  
 Val Asn Met Lys Asn Lys Leu Asn Asn Gln Asn Glu His Val Phe Tyr  
 340 345 350  
 Phe Ile Asn Asn Ala Val Leu Cys Ile Leu Phe Met Gly Arg Ile Phe  
 355 360 365  
 Lys Ser Tyr Ile Ile Ser Met Phe Leu Ile Asn Leu Phe His Asp Ile  
 370 375 380  
 Leu His Asn Tyr Leu Ile Gly Val Ser Met Leu Gln Pro Gln Lys Val  
 385 390 395 400  
 Val Leu Leu

&lt;210&gt; 142

&lt;211&gt; 1345

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 142

Met Ala Val Lys Ile Glu Ala Pro Tyr Phe Thr Asn Asp Phe Val Lys  
 1 5 10 15

Thr Gly Thr Asn Lys Asn Glu Gln Asn Asp Asp Asn Asp Lys Asn Pro  
 20 25 30

Asn	Glu	Gln	Ile	Thr	Glu	Asp	Asp	Ser	Trp	Val	Val	Ile	Gly	Ser	Phe	35	40	45
Phe	Gly	Ser	His	Gly	Leu	Val	Asn	Gln	Gln	Ile	Glu	Ser	Tyr	Asn	Asp	50	55	60
Phe	Ile	Glu	Tyr	Arg	Met	Gln	Glu	Ile	Ile	Asp	Glu	His	Pro	Lys	Ile	65	70	75
Glu	Ile	Arg	Pro	Gln	Pro	Gln	Tyr	Arg	Thr	Asp	Arg	Asp	Glu	Asn	Asp	85	90	95
Asn	Ile	Ile	Tyr	Ser	Leu	Lys	Phe	Gly	Gln	Leu	Ser	Leu	Asp	Arg	Pro	100	105	110
Phe	Tyr	Asp	Glu	Lys	Asn	Leu	Ser	Asn	Lys	Asn	Leu	Trp	Pro	Gln	Glu	115	120	125
Ala	Arg	Leu	Arg	Asn	Leu	Thr	Tyr	Ser	Ser	Ala	Ile	Tyr	Ile	Asp	Ile	130	135	140
Glu	Gln	Ser	Thr	Tyr	Ile	Ile	Asp	Glu	Val	Thr	Lys	Lys	Pro	Val	Leu	145	150	155
Lys	Glu	Lys	Phe	Ile	Tyr	Glu	Arg	Ile	Asn	Leu	Gly	Arg	Ile	Pro	Leu	165	170	175
Met	Leu	Lys	Ser	Met	Phe	Cys	Trp	Thr	Lys	Gly	Leu	Pro	Glu	Asn	Glu	180	185	190
Ile	Ala	Asp	Met	Gly	Glu	Cys	Ser	Tyr	Asp	Gln	Gly	Gly	Tyr	Phe	Ile	195	200	205
Val	Asn	Gly	Gly	Glu	Lys	Val	Leu	Val	Ala	Gln	Glu	Arg	Met	Ala	Asn	210	215	220
Asn	Phe	Ile	Tyr	Val	Phe	Lys	Lys	Lys	Gln	Pro	Ser	Lys	Phe	Gly	Trp	225	230	235
Val	Ala	Glu	Ile	Arg	Ser	Gln	Met	Glu	Arg	Ser	Gln	Ala	Thr	Ser	Gly	245	250	255
Phe	Ser	Val	Lys	Met	Lys	Thr	Arg	Ser	Gly	Gly	Ser	Gln	Tyr	Gly	Ser	260	265	270
Asn	Lys	Ser	Gly	Gly	Gln	Leu	Val	Ala	Thr	Leu	Pro	Tyr	Ile	Arg	Thr	275	280	285
Glu	Ile	Ser	Val	Gly	Ile	Leu	Phe	Arg	Ala	Leu	Gly	Cys	Thr	Ser	Asp	290	295	300
Arg	Asp	Ile	Leu	Gln	Arg	Ile	Val	Tyr	Asp	Phe	Asn	Asp	Lys	Leu	Met	305	310	315
Ile	Asn	Ala	Leu	Arg	Glu	Thr	Leu	Glu	Glu	Cys	Ile	Glu	Tyr	Pro	Thr	325	330	335
Gln	Asp	Val	Cys	Leu	Asp	Phe	Ile	Gly	Lys	Arg	Gly	Pro	Thr	Val	Gly	340	345	350
Ala	Ser	Arg	Glu	Lys	Arg	Ile	Leu	Tyr	Ala	Lys	Glu	Leu	Leu	Arg	Lys	355	360	365
Glu	Val	Leu	Pro	His	Met	Gly	Thr	His	Pro	Gly	Val	Glu	Ser	Lys	Lys	370	375	380
Ser	Tyr	Phe	Ile	Gly	Tyr	Met	Ile	Asn	Arg	Leu	Leu	Leu	Ala	Glu	Leu	385	390	395

Gly Arg Ile Lys Glu Asp Asp Arg Asp His Phe Gly Lys Lys Arg Leu  
 405 410 415  
 Asp Ile Ala Gly Pro Leu Met Ala Ser Ser Phe Ser Thr Tyr Phe Arg  
 420 425 430  
 Lys Met Ala Lys Asp Val Arg Arg Val Leu Gln Arg Gln Ile Asp Asn  
 435 440 445  
 Asn Lys Pro Phe Asp Val Ala Gly Ala Ile Arg Ser Cys Ser Gln Ile  
 450 455 460  
 Thr Gln Gly Met Gln Tyr Gln Leu Ala Thr Gly Asn Trp Gly Lys Asp  
 465 470 475 480  
 Lys Asp Gly Lys Val Ile Arg Thr Gly Val Ala Gln Val Leu Asn Arg  
 485 490 495  
 Leu Thr Tyr Ser Ser Cys Leu Ser His Leu Arg Arg Leu Asn Thr Pro  
 500 505 510  
 Leu Gly Arg Glu Gly Lys Met Ala Lys Pro Arg Gln Leu His Asn Thr  
 515 520 525  
 His Trp Gly Met Ile Cys Pro Phe Glu Thr Pro Glu Gly Gln Ser Val  
 530 535 540  
 Gly Leu Val Lys Asn Leu Ser Leu Met Cys Asp Ile Ser Val Gly Thr  
 545 550 555 560  
 Ser Thr Asn Asn Ile Tyr Glu Phe Leu Thr Glu Trp Gly Leu Glu Ser  
 565 570 575  
 Leu Asp Glu Val Pro Pro Glu Leu Met Lys Glu Lys Val Lys Leu Phe  
 580 585 590  
 Leu Asn Gly Lys Trp Val Gly Cys Phe Asn Gln Ile Asp Asn Leu Ile  
 595 600 605  
 Glu Thr Leu Tyr Glu Leu Arg Arg Arg Cys Asp Ile Ser Pro Glu Ala  
 610 615 620  
 Ser Ile Val Arg Asp Val Asn Ser Lys Glu Ile Lys Ile Phe Thr Asp  
 625 630 635 640  
 Ser Gly Arg Ala Met Arg Pro Leu Tyr Val Val Lys Asn Val Asn Gly  
 645 650 655  
 Glu Asn Lys Leu Lys Leu Thr Lys Glu His Val Asn Asn Ile Glu Lys  
 660 665 670  
 Tyr Pro Glu Thr Tyr Asn Trp Asp Tyr Leu Ile Gln Glu Gly Ile Ile  
 675 680 685  
 Glu Tyr Ile Asp Cys Glu Glu Glu Glu Thr Thr Met Ile Ser Met Phe  
 690 695 700  
 Ile Asp Asp Leu Lys Thr Gly Thr Gly Tyr Tyr Asn Asn Phe Thr His  
 705 710 715 720  
 Cys Glu Ile His Pro Ser Leu Ile Leu Gly Val Cys Ala Ser Ile Ile  
 725 730 735  
 Pro Phe Ser Asp His Asn Gln Ser Pro Arg Asn Thr Tyr Gln Ser Ala  
 740 745 750  
 Met Gly Lys Gln Ala Met Gly Ile Tyr Val Thr Asn Phe Asn Ile Arg  
 755 760 765  
 Leu Asp Thr Leu Ala His Leu Leu Tyr Tyr Pro Gln Lys Pro Leu Val



770					775					780					
Cys 785	Thr	Lys	Val	Met	Glu 790	Tyr	Leu	Arg	Phe	Arg 795	Glu	Leu	Pro	Ala	Gly 800
Ile	Asn	Ala	Ile	Val 805	Ala	Ile	Met	Cys	Tyr 810	Thr	Gly	Tyr	Asn	Gln 815	Glu
Asp	Ser	Leu	Ile 820	Met	Asn	Gln	Ser	Ser 825	Ile	Asp	Arg	Gly	Leu 830	Phe	Arg
Ser	Val	Phe 835	Tyr	Arg	Thr	Tyr	Thr 840	Ser	Glu	Glu	Lys	Gln 845	Gln	Gly	Ser
Leu	Ile 850	Ile	Glu	Ser	Phe	Glu 855	Lys	Pro	Ser	Val	Arg 860	Val	Val	Lys	Asn
Leu 865	Lys	Arg	Gly	Asp	Tyr 870	Thr	Lys	Leu	Asp	Asp 875	Asp	Gly	Leu	Ile	Ala 880
Pro	Gly	Ile	Arg	Val 885	Leu	Gly	Asp	Asp	Ile 890	Ile	Ile	Gly	Lys	Val 895	Ser
Pro	Asn	Ile	Asp 900	Asp	Glu	Asp	Asp	Ile 905	Ile	Ile	Glu	Lys	Arg 910	Asn	Thr
Ser	Ser	Ser 915	Ser	Ile	Gln	Ile	Tyr 920	Asn	Lys	Asp	Ser	Ile 925	Ser	Asn	Asn
Asn 930	Ser	Asn	Asn	Ser	Asn	Asn 935	Asn	Met	Asn	Asn	Met 940	Ser	Asn	Met	Ser
Asn 945	Met	Ser	Asn	Ile	Arg 950	Ser	Ser	Ile	Ser	Ser 955	Asn	Leu	Ser	Phe	Ser 960
Ser	Asn	Ile	Gly	Ser 965	Ser	Asn	Val	Leu	Asp 970	Thr	Leu	Pro	Asp	Ser 975	Pro
Ile	Asn	Asn	Thr 980	Tyr	Asn	Asn	Asn 985	Asn	Asn	Ile	Asn	Ile	Asn 990	Ser	Ser
Ser	Asn	Asn 995	Tyr	Ser	Leu	His 1000	Gly	Ala	Ala	Ser	Val 1005	Thr	Ser	Ser	Thr
Pro 1010	Ser	Ser	Thr	Thr	Ile	Phe 1015	Ser	Ser	Gly	Gln	Thr 1020	Ala	Gly	Ser	Ser
Asn 1025	Ser	Asn	Thr	Lys	Tyr 1030	Gly	Thr	Thr	Ile	Val 1035	Ser	Ser	Thr	Lys	Asp 1040
Asp	Thr	Glu	Ile	Pro 1045	Thr	Leu	Thr	Ile	Ser 1050	Ser	Thr	Asn	Val	Leu 1055	Lys
Gln	Tyr	Lys	Lys	Asp	Cys	Ser	Leu 1065	Ser	Leu	Arg	Ser	Asn 1070	Glu	Asn	Gly
Val	Ile	Asp 1075	Thr	Val	Met	Leu	Ser 1080	Ser	Asn	Ser	Arg	Gly 1085	Asn	Lys	Phe
Ala 1090	Lys	Val	Lys	Val	Arg	Ser 1095	Val	Arg	Ile	Pro	Gln 1100	Ile	Gly	Asp	Lys
Phe 1105	Ala	Ser	Arg	His	Gly 1110	Gln	Lys	Gly	Thr	Ile 1115	Gly	Ile	Thr	Tyr	Arg 1120
Thr	Glu	Asp	Met 1125	Pro	Phe	Ser	Ser	Leu	Gly 1130	Ile	Phe	Pro	Asp	Ile 1135	Ile
Met	Asn	Pro	His 1140	Ala	Val	Pro	Ser	Arg 1145	Met	Thr	Ile	Gly	His 1150	Leu	Val

Glu Cys Leu Thr Gly Lys Val Ala Ala Ile Glu Gly Gly Glu Gly Asp  
 1155 1160 1165  
 Ala Thr Pro Phe Ser Lys Ile Thr Val Gln Glu Ile Ser Gln Lys Leu  
 1170 1175 1180  
 His Asn Leu Gly Tyr Glu Lys Tyr Gly Asn Glu Met Leu Tyr Asn Gly  
 1185 1190 1195 1200  
 His Asn Gly Arg Met Leu Lys Ser Lys Ile Phe Ile Gly Pro Thr Tyr  
 1205 1210 1215  
 Tyr Gln Arg Leu Lys His Met Val Glu Asp Lys Ile His Ala Arg Ser  
 1220 1225 1230  
 Arg Gly Pro Leu Thr Met Ile Thr Arg Gln Pro Thr Glu Gly Arg Ser  
 1235 1240 1245  
 Arg Asp Gly Gly Leu Arg Phe Gly Glu Met Glu Arg Asp Cys Met Ile  
 1250 1255 1260  
 Ser His Gly Ser Ala Lys Met Leu Lys Glu Arg Leu Phe Glu Glu Ser  
 1265 1270 1275 1280  
 Asp Ala Tyr Arg Val His Val Cys Asp Asn Cys Gly Leu Cys Cys Ile  
 1285 1290 1295  
 Ala Asp Ile Asn Lys Asn Ala Tyr Glu Cys Thr Val Cys Asn Ser Lys  
 1300 1305 1310  
 Thr Asn Ile Ser Gln Ile Tyr Leu Pro Tyr Ala Cys Lys Leu Leu Phe  
 1315 1320 1325  
 Gln Glu Leu Met Thr Met Ala Ile Tyr Pro Lys Leu Val Leu Glu Asp  
 1330 1335 1340  
 Val  
 1345

<210> 143  
 <211> 899  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 143  
 Met Tyr Lys Ile Lys Asn Asn Glu Ser Asp Ile Asn Ser Asp Asp Cys  
 1 5 10 15  
 Asn Glu Thr Ala Gln Glu Cys Ile Tyr Gly Phe Ser Ser Pro Lys Lys  
 20 25 30  
 Ser Arg Lys Glu Ser Pro Ile Phe Val Gln Asn Asn Asp Asp Thr Cys  
 35 40 45  
 Ser Ser Asn Asn Ile Tyr Glu Lys Lys Thr Cys Ser Asn Thr Ser Ala  
 50 55 60  
 Ser Ser Val Lys Lys Tyr Asp Lys Lys Glu Gln Ser Leu Cys Ser Asp  
 65 70 75 80  
 Ile Asn Asn Tyr Asn Lys Val Asn Ile Glu Gly Leu Lys Ile Asn Glu  
 85 90 95  
 Arg Asn Tyr Asp Arg Ile Asn Asn Ser Glu Glu Glu Thr Asn Ile Asn  
 100 105 110  
 Asp Asp Asn Asn Asp Asp Asn Asn Gly Asp Tyr Asp Asp Asp Asn Asn  
 115 120 125

Ser Asp Asp Asp Asp Asp Asn Asp Asp Asn Asn Asn Asn Asp Asp Asn  
 130 135 140  
 Asn Asn Asp Asp Asp Glu Asp Val Asp Asp Phe Glu Asp Ile Lys Glu  
 145 150 155 160  
 Asn Asp Glu Tyr Lys Asp Pro Thr Tyr Ser Asp Ile Tyr Lys Glu Ala  
 165 170 175  
 Lys Lys Cys Asn Ile Arg Cys Glu Asn Ile Met Asn Ser Ser Val Asn  
 180 185 190  
 Lys Lys Asn Leu Glu Glu Ile Asn Glu Ser Asp Pro Leu Asn Ser Ser  
 195 200 205  
 Asp Asn Ser Met Thr Ser Ser Ser Glu Glu Ser Cys Ser Glu Glu Ser  
 210 215 220  
 Asp Lys Glu Ser Asp Lys Glu Ser Asp Lys Asp Gly Asn Leu Tyr Asp  
 225 230 235 240  
 Glu Glu Leu Asn Glu Ile Ile Glu Glu Gly Tyr Phe Lys Glu Leu Ile  
 245 250 255  
 Pro Ala Ile Pro His Asp Ile Leu Gln Ala Tyr Ile Ser Cys Leu Lys  
 260 265 270  
 Ile Cys Gly Phe Glu Arg Gln Val Gln Leu His Arg Leu Ile Asn Leu  
 275 280 285  
 Leu Gly Asp Leu Arg Asp Pro Ile Ser Val Ile Gln Ile Leu Gly Leu  
 290 295 300  
 Pro Gly Met Gly Lys Thr Lys Val Val Lys Asn Phe Ile Lys Leu Thr  
 305 310 315 320  
 Asn Val Pro Phe Ala Tyr Val Asn Cys Leu Met Ala Val Tyr Gln Ser  
 325 330 335  
 Gly Arg Ser Ala Lys Asn Val Ile Tyr His Thr Ile Leu Lys Asp Leu  
 340 345 350  
 Ser Ile Asn Leu Leu Asn Glu Phe Asn Glu Tyr Lys Lys Ile Asn Asn  
 355 360 365  
 Ile Thr Asn Tyr Ser Tyr Asp Pro Thr Lys Leu Val Pro Asn His Val  
 370 375 380  
 Ser Asn Thr Asp Asn Phe Phe Ser Ile Leu His Lys Leu Leu Ser Phe  
 385 390 395 400  
 Lys Pro Glu Asp Ile Leu Asn Asn Lys Arg Thr Thr Glu Asn Ile Arg  
 405 410 415  
 Ser Pro Ser Asn Ser Asn Asn Asn Lys Lys Lys Lys Lys Glu Gln Asn  
 420 425 430  
 Asp Ser Thr Gly Lys Asn Ser Lys Glu Glu Cys Asn Asn Asn Glu Asp  
 435 440 445  
 Asp Asp Asp Asp Asn Asn Lys Asn Asn Phe Asn Asn Asn Asn Ser Asn  
 450 455 460  
 Asn Val Arg Phe Asn Ser Asn Thr Asn Tyr Tyr Lys Asp Lys Leu Tyr  
 465 470 475 480  
 Asp Arg Ser Val Val Phe Ile Leu Asp Asn Ile Arg Tyr Leu Val Arg  
 485 490 495

Thr His Pro Asp Leu Phe Tyr Ala Leu Thr Arg Ile His Glu Tyr Ile  
 500 505 510  
 Lys Gly Pro Tyr Asn Asp Val Thr Lys Ala Asn Lys Thr Thr Arg Gly  
 515 520 525  
 Leu Cys Ile Ile Leu Ile Asn Arg Ser Pro Leu Pro Asp Glu Ile Phe  
 530 535 540  
 Asp Gly Leu Pro Gln Pro Pro Thr Val Trp Phe Asp Ser Tyr Thr Ser  
 545 550 555 560  
 Glu Met Cys Lys Asn Ile Leu Tyr Arg Leu Tyr Asn Ser Met Cys Phe  
 565 570 575  
 Glu Ser Leu Leu Thr Tyr Asn Asp Lys Asp Leu Lys Ile Tyr Tyr Val  
 580 585 590  
 Lys His Asn Lys Asn Glu Phe Leu Ile Lys Arg Asn Asp Val Ile Leu  
 595 600 605  
 Glu Asn Asp Val Ile Tyr Asp Ile Trp Cys Arg Tyr Val Asp Tyr Ile  
 610 615 620  
 Ile Asn Val Ser Tyr Lys Asp Tyr Lys Ser Asp Phe His Glu Leu Leu  
 625 630 635 640  
 Phe Ile Cys Ser His Met Trp Pro Leu Phe Ile Lys Pro Ile Leu Asp  
 645 650 655  
 Gly Val Leu Glu Pro Ile Val Glu Asn Met Asn Ala Leu Gln Arg Asn  
 660 665 670  
 Ile Asp Thr His Ile Arg Val Ala Thr Tyr Asn His Ser Ser His Phe  
 675 680 685  
 Thr Phe Glu Leu Ile Asp Ser Val Phe Leu Asn Glu Asn Asn Leu Lys  
 690 695 700  
 Asn Lys Ile Asp Leu Ser Phe Tyr Ser Lys Ile Leu Leu Val Gly Ala  
 705 710 715 720  
 Tyr Leu Ala Ser Arg Asn Leu Pro Leu Thr Asp Lys Arg Phe Phe Asn  
 725 730 735  
 Ala Thr Val Lys Gly Gly Ala Phe Thr Leu Pro Lys Lys Arg Lys Gly  
 740 745 750  
 Lys Asn Lys Asn Glu Ser Ile Leu Thr Leu Leu Ser Lys Ser Ile Pro  
 755 760 765  
 Lys Asn Phe Thr Phe Ile Arg Trp Leu Cys Leu Thr Asp Cys Leu Leu  
 770 775 780  
 Val Cys Phe Phe Asp Glu Gln Leu Ile Leu Asn Ser Leu Ile Cys Gln  
 785 790 795 800  
 Gln Ile Asn Thr Leu Ile Gln Leu Gly Phe Ile Ser Phe Ser Ser Pro  
 805 810 815  
 Asn Asn Leu Ser Cys Leu Val Arg Asn Ser Leu Met Asn Gly Val Gln  
 820 825 830  
 Trp Ser Gly Tyr Cys Gly Ser Ala Leu Leu Asn Thr Thr Thr Asn Phe  
 835 840 845  
 Ser Ser Leu Thr Asn Asn Ile Phe Cys Glu Thr Asn Asn Ser Met Thr  
 850 855 860  
 Tyr Glu Ser Leu Asp Pro Tyr Thr Lys Leu Val Ile Gln Val Pro Glu

<400> 145																	
Met	Ile	Asn	Ser	Asp	Asn	Lys	Cys	Met	Asn	Asp	Asn	Lys	Glu	Ser	Ile		
1				5					10					15			
Pro	Lys	Glu	Tyr	Lys	Thr	Gln	Asp	Met	Ile	Glu	Gly	Glu	Lys	Glu	Arg		
			20					25					30				
Lys	Asn	Lys	Ile	Ile	Lys	Glu	Tyr	Ile	Lys	Asn	Met	Asn	Glu	Glu	Asp		
		35					40					45					
Phe	Leu	Tyr	Leu	Ser	Glu	His	Leu	Lys	Ile	Arg	Ile	Asp	Asn	Glu	Ile		
	50					55					60						
Phe	Met	Ser	Gln	Glu	Leu	Asn	Asp	Tyr	Ile	Asn	Lys	His	Ile	Asp	Ile		
	65				70					75					80		
Ile	Cys	Glu	Leu	His	Phe	Lys	Asn	Phe	Lys	Arg	Pro	Lys	Thr	His	Met		
				85					90					95			
Lys	Lys	Val	Phe	Ile	Asp	Leu	Thr	Leu	Lys	Leu	Lys	Tyr	Leu	Arg	His		
			100					105					110				
Leu	Glu	Tyr	Leu	Lys	Arg	Lys	Lys	Lys	Lys	Asp	Lys	Glu	Asn	Lys	Ser		
		115					120					125					
Lys	Ser	Lys	Lys	Glu	Lys	Asn	Asn	Lys	Asn	Glu	Lys	Asp	Asp	Glu	Met		
	130					135					140						

Glu Asn Lys Lys Glu Lys Asn Asn Lys Asn Glu Lys Asp Asp Glu Met  
 145 150 155 160  
 Glu Asn Lys Lys Glu Lys Asn Asn Lys Asn Glu Lys Asp Asp Glu Met  
 165 170 175  
 Glu Asn Lys Lys Glu Lys Asn Asn Lys Asn Glu Lys Asp Asp Glu Met  
 180 185 190  
 Glu Asn Lys Lys Glu Lys Asn Asn Lys Asn Glu Lys Asp Asp Glu Met  
 195 200 205  
 Glu Asn Lys Lys Glu Lys Asn Asn Lys Asn Glu Lys Asp Asp Glu Met  
 210 215 220  
 Glu Asn Lys Lys Glu Lys Asn Asn Lys Asn Glu Lys Asp Asp Glu Ile  
 225 230 235 240  
 Lys Glu Asn Met Asp Lys Val Met Glu Asn Gln Leu Asn Gln Ser Asn  
 245 250 255  
 Ile Leu Tyr Asn Lys Asp Arg Ile Arg Lys Asn Arg Asn Asn Leu Lys  
 260 265 270  
 Asp Glu Lys Asp Val Ser Asn Lys Asn Ile Leu Asp Asp Asn Lys Asp  
 275 280 285  
 Ile Val Glu Phe Lys Leu Gln Asp Ile Ser Ser Gly Tyr Ser Glu Thr  
 290 295 300  
 Ser Cys Lys Ser Thr Asn Ser Ile Glu Asn Gly Asn Ser Ser Ser Thr  
 305 310 315 320  
 Ser Ser Cys Asp Asp Asp Ser Ser Phe Leu Phe Ser Cys Ser Ser Asp  
 325 330 335  
 Cys Asp Glu Glu Thr Ser Asp Glu Glu Ile Leu Ser Thr Ile His Phe  
 340 345 350  
 Asp Glu Lys Glu Met Ser Thr Leu Lys Ser Leu Glu Lys Ala Lys Asn  
 355 360 365  
 Val Tyr Phe Ala Tyr Ile Asn Lys Lys Phe Lys Lys Tyr Asn Ile Leu  
 370 375 380  
 Asp His Phe Asn Met Asn Phe Leu Glu Arg Leu Asn Tyr Tyr Phe Ser  
 385 390 395 400  
 Lys Leu Tyr Tyr Gln Asn Asn Asn Leu Lys Gln Thr Asn Glu Tyr Gln  
 405 410 415  
 Asn Arg Ile Lys Glu Phe Leu Ser Asn Glu Glu Asn Val Lys Lys Ile  
 420 425 430  
 Glu Leu Asn Gln Ser Lys Leu Arg Ser Asp Ile Leu Asn Ser Met Phe  
 435 440 445  
 Gly Phe His Ile Ile Asn Glu Thr His Pro Met Lys Leu Pro Ile Lys  
 450 455 460  
 Asn Met Asn Asn Leu Ser Tyr Gln Asn Thr Lys Val Asp Asn Ile Tyr  
 465 470 475 480  
 Ala Tyr Lys Ser Asn Thr Asn Lys Cys Arg Val His Thr Lys Leu Asn  
 485 490 495  
 Gln Leu Tyr Glu Thr Asn Asp Asn Ile Arg Asn Met Asn Tyr Tyr Lys  
 500 505 510  
 Thr Ile Glu Tyr Met Asn Ser Glu Asn Asn Ile Asn Asn Met Asn Ile

515					520					525					
Leu	Asn	Glu	Trp	Thr	Asn	Phe	Met	Asp	Gln	Asn	Ile	Asn	Ile	Glu	Ser
530						535					540				
Ile	Ser	Pro	Glu	Gln	His	Lys	Lys	Gly	Asn	Arg	Lys	Lys	Lys	Ile	Asn
545					550					555					560
Thr	Lys	Lys	Leu	Tyr	His	His	Asp	Asn	Tyr	Asn	Asn	Asn	Asn	Asn	Asn
				565					570					575	
Asn	Asn	Asn	Asp	Asn	Asn	Asn	Asp	Asn	Asn	Asn	Asp	Asn	Asn	Asn	Asp
			580					585					590		
Asn	Asn	Asn	Asp	Asn	Asn	Asn	Asp	Asn	Asn	Asn	Asn	Ile	Asn	Cys	Ile
			595				600					605			
Tyr	Gly	Glu	His	His	Asn	Val	Lys	His	Lys	Lys	Arg	Lys	Ser	Thr	Ser
610						615					620				
Lys	Ser	Lys	His	Ile	Phe	Arg	Ser	Asn	Glu	Val	Ser	Ile	His	Phe	Asn
625					630					635					640
Asp	Asp	Ile	Lys	Lys	Ile	Glu	His	Val	Ala	Lys	Lys	Glu	Leu	Gln	Glu
				645					650					655	
Tyr	Ile	Lys	Gln	Ile	His	Asn	Lys	Ser	Lys	Ile	His	Asn	Asn	Ile	Ser
			660					665					670		
Ser	Leu	Lys	Gln	Tyr	Met	Leu	Ile	Ser	Asn	Trp	Lys	Glu	Leu	Thr	Lys
		675				680						685			
His	Asn	Asn	Tyr	Met	Thr	Leu	Leu	Ser	Glu	Glu	Lys	Lys	Arg	Asn	Ser
	690					695					700				
Lys	Ile	Leu	Ala	Asn	Leu	Cys	Tyr	Asn	Gln	Met	Lys	Ala	Ile	Asp	Gln
705					710					715					720
Lys	Arg	Lys	Ile	Ile	Leu	Glu	Lys	Glu	Glu	Arg	Glu	Arg	Met	Lys	Leu
				725					730					735	
Leu	Lys	Asp	Asn	Asp	Ile	Glu	Ala	Tyr	Met	Lys	Leu	Ile	Lys	Thr	Ala
			740					745					750		
Lys	Asn	Lys	Arg	Leu	Gln	Glu	Leu	Leu	Asp	Val	Thr	Glu	Gln	Phe	Leu
		755					760					765			
Asn	Asn	Met	Ser	Lys	Cys	Val	Leu	Tyr	Gln	Lys	Lys	Glu	Ala	Tyr	Gln
	770					775					780				
Glu	Ser	Ser	Glu	Gln	Asn	Phe	His	Gly	Leu	Ile	Asn	His	Lys	Asn	Glu
785					790					795					800
Asp	Asn	Glu	Lys	Cys	His	Lys	Asn	Tyr	Asn	Ser	Lys	Asp	Asn	Asn	Asn
				805					810				815		
Ile	Leu	Gln	Ser	Val	His	Asn	Leu	Thr	Thr	His	Gly	Gln	Gln	Asn	Gly
			820					825					830		
Tyr	Asn	Asn	Lys	Lys	Gly	Tyr	Asp	Thr	Met	Tyr	Glu	His	Asn	Glu	Asn
			835				840					845			
Asn	Thr	Lys	Ile	Cys	Asn	Tyr	Lys	Asn	Ala	Arg	Glu	Asn	Tyr	Tyr	Asn
	850					855					860				
Ile	Ser	His	Val	Val	Lys	Glu	Lys	Val	Lys	Gln	Pro	Ser	Ile	Leu	Ile
865					870					875					880
Gly	Gly	Glu	Leu	Met	Lys	Tyr	Gln	Leu	Glu	Gly	Leu	Glu	Trp	Leu	Val
				885					890					895	

Ser Leu Tyr Asn Asn Asn Leu His Gly Ile Leu Ala Asp Glu Met Gly  
 900 905 910  
 Leu Gly Lys Thr Ile Gln Thr Ile Ser Leu Phe Ala Tyr Leu Lys Glu  
 915 920 925  
 Phe Lys Asn Asn Ile Asn Val Lys Asn Leu Ile Ile Val Pro Leu Ser  
 930 935 940  
 Thr Leu Pro Asn Trp Ile Ser Glu Phe Asn Arg Trp Cys Pro Ser Leu  
 945 950 955 960  
 Asn Val Ile Thr Tyr Arg Gly Asn Lys Leu Glu Arg Lys His Ile Ala  
 965 970 975  
 Lys Lys Leu Leu Glu Gln Thr Phe Asp Ile Cys Ile Thr Thr Phe Asp  
 980 985 990  
 Leu Val Ile Lys Glu Lys Ser Phe Leu Met Lys Ile Ser Trp Asn Tyr  
 995 1000 1005  
 Ile Val Val Asp Glu Gly His Arg Met Lys Asn Asn Lys Ser Arg Phe  
 1010 1015 1020  
 His Val Phe Leu Ser Glu Phe Lys Ser Lys Tyr Arg Ile Leu Leu Thr  
 1025 1030 1035 1040  
 Gly Thr Pro Leu Gln Asn Asn Leu Ser Glu Leu Trp Ser Leu Leu Asn  
 1045 1050 1055  
 Phe Leu Leu Pro Lys Ile Phe Ser Ser Cys Val Asp Phe Glu Lys Trp  
 1060 1065 1070  
 Phe Val Lys Ser Leu His Asn Glu Lys Asp Val Tyr Glu His Ile Thr  
 1075 1080 1085  
 Glu Glu Glu Gln Leu Leu Ile Ile Asn Arg Leu His Ser Val Leu Leu  
 1090 1095 1100  
 Pro Phe Met Leu Arg Arg Val Lys Lys Asp Val Leu Lys Ser Leu Pro  
 1105 1110 1115 1120  
 Lys Lys Tyr Glu Tyr Asn Ile His Ile Glu Leu Ser Leu Tyr Gln Lys  
 1125 1130 1135  
 Ile Leu Tyr Lys Gln Ile Gln Thr Lys Gly Phe Lys Gln Val Asn His  
 1140 1145 1150  
 Asn Gly Ser Ile Thr Thr Lys Ile Phe Gln Asn Ile Val Met Gln Leu  
 1155 1160 1165  
 Arg Lys Ile Val Asn His Pro Tyr Leu Phe Leu Tyr Asp Tyr Asn Ile  
 1170 1175 1180  
 Asp Glu Asn Ile Ile Lys Cys Ser Gly Lys Phe Glu Val Leu Asp Arg  
 1185 1190 1195 1200  
 Met Leu Pro Lys Leu Leu Lys Phe Lys His Lys Val Leu Ile Phe Ser  
 1205 1210 1215  
 Gln Met Thr Lys Leu Met Asn Ile Leu Cys Asp Tyr Leu Glu Phe Arg  
 1220 1225 1230  
 Gly Tyr Lys Tyr His Arg Leu Asp Gly Asn Ile Gly Leu Gln Glu Arg  
 1235 1240 1245  
 Lys Lys Ile Ile Asp Gln Phe Asn Asn Asn Val Glu Tyr Lys Lys Asp  
 1250 1255 1260



Glu Gly Lys Gln Pro Asn Cys Glu Met Pro Gly Asn Glu Asn Met Asn  
 1265 1270 1275 1280  
 Met Ser Gly Asn Glu Asn Met Asn Met Ser Val Asn Glu Asn Met Asn  
 1285 1290 1295  
 Met Ser Val Asn Glu Asn Met Asn Met Ser Gly Asn Glu Asn Met Asn  
 1300 1305 1310  
 Met Ser Gly Asn Glu Asn Met Asn Met Ser Gly Asn Glu Asn Met Asn  
 1315 1320 1325  
 Met Ser Gly Asn Glu Asn Met Asn Met Ser Gly Asn Glu Asn Met Asn  
 1330 1335 1340  
 Met Ser Gly Asn Glu Asn Met Asn Met Ser Gly Asn Glu Asn Ile Lys  
 1345 1350 1355 1360  
 Met Ile Ser Ser Gln Asn Glu Lys Asp Thr Ser Ser Gln Ser Val Lys  
 1365 1370 1375  
 Ile Ser Glu Leu Lys Lys Glu Glu Ile Asn Asp Phe Gln Ile Met Asp  
 1380 1385 1390  
 Asp Lys Asn Val Asn Gly Gly Asn Gln Asp Ala Met Ile Phe Ile Leu  
 1395 1400 1405  
 Ser Thr Arg Ser Gly Ser Leu Gly Leu Asn Leu Gln Thr Ala Asp Thr  
 1410 1415 1420  
 Val Ile Ile Phe Asp Ser Asp Phe Asn Pro His Gln Asp Ile Gln Ala  
 1425 1430 1435 1440  
 Met Cys Arg Cys His Arg Ile Gly Gln Lys Asn Val Val Lys Val Phe  
 1445 1450 1455  
 Arg Phe Ile Thr Leu Ser Gly Val Glu Glu Leu Val Phe Lys Lys Ala  
 1460 1465 1470  
 Gln His Lys Leu Ser Ile Asn Asp Lys Val Ile Gln Ala Gly Leu Phe  
 1475 1480 1485  
 Asn Lys Ile Tyr Asn Asp Glu Asp Arg Gln Asn Lys Leu Lys Asp Ile  
 1490 1495 1500  
 Ile Gln Arg Asn Gln Lys Asn Asp Met Thr Thr His Pro Thr Asn Pro  
 1505 1510 1515 1520  
 Leu Leu Leu Asn Tyr Tyr Met Lys Arg Asn Glu Glu Glu Leu Glu Tyr  
 1525 1530 1535  
 Phe Leu Asp Phe Asp Lys Arg Tyr Phe Gly Glu Gln Tyr Phe Ser Leu  
 1540 1545 1550  
 Leu Asn Thr Leu Asn Val Glu Asn Val Asp Ser Gly Gln Phe Thr Tyr  
 1555 1560 1565  
 Met Ser Glu Asp Glu Lys Glu Glu Asn Glu Thr Tyr Leu Ser Ser Ile  
 1570 1575 1580  
 Ile Lys Lys Glu Lys Lys Glu Glu Glu Gly Glu Asp Asp Glu Glu Asn  
 1585 1590 1595 1600  
 Gln Arg Asp Arg Asn Lys Glu Glu Asp Gln Asp Glu Asp Lys Asp Asp  
 1605 1610 1615  
 Asp Lys Asp Lys Asp Lys Asp Lys Asp Lys Glu Glu Glu Glu Glu Lys  
 1620 1625 1630  
 Lys Arg Lys His Ile Leu Asn Asn Asn Asn Asn Asn Gly Ile Gln Asn

1635	1640	1645
Gly Ser Ser Ile Asn Glu Gly Val Lys Glu Lys Ile Leu Asp Glu Tyr 1650 1655 1660		
Cys Asn Asn Asn Thr Lys Cys Val Lys Val Ser Asn Glu Arg Leu Ile 1665 1670 1675 1680		
Phe Lys Arg Lys His Asp Thr Asp Asp Leu Gln Cys Glu Asp Glu Lys 1685 1690 1695		
Ile Lys Glu Asn Glu Glu Cys Asp Val Asp Asn Ile Ile Gln Asn Lys 1700 1705 1710		
Asn Asn Lys Arg Leu Lys Met Glu Cys Gln Lys Asp Asp Lys Asp Asp 1715 1720 1725		
Asp Ile Asn Ser Asn Ile His Met Asp Glu Lys Lys Lys Ile Tyr Met 1730 1735 1740		
Ser Ser Glu Lys Asp Asp Thr Thr Lys Glu Tyr Ser Asp Thr His Asp 1745 1750 1755 1760		
Pro Tyr Ile Asn Asp Lys Met Gln Val Lys Asp Glu Glu Asp Tyr Tyr 1765 1770 1775		
Gly Phe Ile Leu Lys Glu Glu Asn Gln Asn Asp Ile Glu Lys Ile Leu 1780 1785 1790		
Ile Lys Ser Asn Lys Leu Ile Asn Lys Asp Glu Leu Pro Ala Tyr Leu 1795 1800 1805		
Phe Tyr Asp Asp Thr Asn Asp Ser Pro Asp Lys Ile Asn Leu Lys Arg 1810 1815 1820		
Ser Arg Lys Val Ile Asn Ile Asn Leu Met Gln Glu Glu Lys Leu Thr 1825 1830 1835 1840		
Glu Lys Gln Phe Leu Lys Leu Ile Asp Ser Ser Ser Pro Asn Leu Leu 1845 1850 1855		
Ser Ser Val Glu Lys Asp Leu Gly Arg Asn Lys Lys Asp Ile Val Lys 1860 1865 1870		
Ser Asp Met Glu His Asn Asn Asp Ile Thr Thr Leu Glu Glu Val Lys 1875 1880 1885		
Asp Arg Glu Glu Ile Lys Glu Glu His Leu Glu Thr Thr Lys Asn Ile 1890 1895 1900		
Ser Ser Leu Asn Ile Asn Asp Leu Glu Ile Asn Lys Thr Leu Thr Asn 1905 1910 1915 1920		
Glu Asn Val His Ser Thr Lys Lys Ser Pro Tyr Asn Met Arg Ser Ser 1925 1930 1935		
Lys Arg Arg Ser Asp Thr Ser Ser Thr Tyr Met Glu Thr Ser Ile Lys 1940 1945 1950		
Lys Arg Asn Asp Lys Asp Ile His Ile Cys Leu Lys Lys Gly Lys Lys 1955 1960 1965		
Arg Asn Asn Ser Met Glu His Thr Lys Gln Glu Cys His Val Asp Asp 1970 1975 1980		
Glu Asn Lys Lys Arg Val Lys Lys Arg Lys Ser Ser Gln 1985 1990 1995		

&lt;211&gt; 1182

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 146

Met Asp Ile Gln Arg Lys Ile Lys Lys Cys Ile Thr Leu Lys Arg Lys  
 1 5 10 15

Leu Lys Asn Pro Lys Gly Cys Leu Thr Asn Leu Lys Asn Lys Ile Ile  
 20 25 30

Lys Cys Asn Val Lys Asp Phe Gln Ser Thr Arg Asn Arg Tyr Phe Phe  
 35 40 45

Asn Ile Phe Glu Lys Ile Ile Lys Arg Tyr Ile Phe Asn Asn Val Met  
 50 55 60

Asn Thr Asn Arg Thr Asn Asn Phe Gly Ile Glu Asn Ile Ser Cys Thr  
 65 70 75 80

Gln Tyr Asp Lys Ile Lys Asn Ile Pro Tyr Thr Cys His Asn Ile Lys  
 85 90 95

Tyr Asp Ile His Ser Cys Asn Asn Lys His Ile Tyr Asp Asn Asn Ser  
 100 105 110

Tyr Asn Ile Ile Lys Lys Asn Asn Met Asp Leu Ser Ser Phe Leu Lys  
 115 120 125

Asn Ile Ile Phe Asn Ile Asn Tyr Leu Leu Tyr Leu Phe Asn Lys Asn  
 130 135 140

Asn Arg Ile Tyr Phe Asp Leu His Val Leu Phe Lys Asn Asp Leu Leu  
 145 150 155 160

Leu Gln Arg Asn Ile Asn Ile Ser Tyr Glu Ser Asn Ile Asp Asn Met  
 165 170 175

Ser Arg Glu Gly Val His His Lys Arg Asp Ile Leu Ile Asn Thr Gln  
 180 185 190

Cys Leu Tyr Asn Ile Asn Asp Leu Phe Ala Leu Phe Ile Phe Tyr Val  
 195 200 205

His Ile Lys Arg Phe Tyr Phe Asp Phe Phe Phe Thr Ile Leu Lys Asn  
 210 215 220

Ile Asn Asp Met Glu Ser Thr Asn Asp Tyr Lys Asn Val Cys Tyr Met  
 225 230 235 240

Asn Asn Ile His Lys Glu His Ile Tyr His Ile Phe Pro His Lys Asn  
 245 250 255

Tyr Tyr Asn Ile Gln Asn Met Asn Ser Glu Tyr Cys Leu Lys Phe Leu  
 260 265 270

Lys Ala Cys Ile Gln Leu Lys Asn Ile Ile Ser Asn Ile Val Asn Ile  
 275 280 285

Asn Lys Lys Lys Lys Glu Lys Asn Val Thr Asn His Gln Asn Asn Ile  
 290 295 300

Arg Thr Cys Arg Ile Asn Tyr Phe Val Phe Ile Lys Asn Ala Ile Phe  
 305 310 315 320

Lys Lys Cys Lys Ile Ile Lys Lys Lys Glu Lys Lys Lys Lys Lys Asn  
 325 330 335

Asp Glu Gln Ile Tyr Ile Lys Ala Tyr Ile His Asn Ser Val Tyr Thr  
 340 345 350

Asn Ile Phe Lys Asp Met Leu Leu His Asn Ile Lys Ile Glu Arg Lys  
 355 360 365  
 Lys Lys Lys Ile Asn Asn Asn Asn Lys Ile Ile Asn Asn Lys Ile Ile  
 370 375 380  
 Asn Lys Asn Ile Ile Glu Leu Phe Asn Asn Asn Ile Ile Arg Lys Lys  
 385 390 395 400  
 Tyr Ile His Phe Phe Phe Leu Lys Lys Gln Lys Tyr Lys Asn Met Thr  
 405 410 415  
 Tyr His Lys Phe Lys Lys Arg Lys Asp Met Asn Thr Leu Ile Met Cys  
 420 425 430  
 Asp Lys Tyr Ile Asn Lys Ser Ile Cys Leu Phe Leu Asn Asn Phe Gln  
 435 440 445  
 Asp Ser Ser Ile Phe Ile Lys Tyr Met Lys Ile Ile Lys Lys Ala Asn  
 450 455 460  
 Ile Ile Asn Tyr Leu Tyr Asp Asp His Val Phe Ile Lys Ser Leu Met  
 465 470 475 480  
 Lys Cys Val Lys Lys Asn Cys Ala Tyr Phe Thr Gly Gln Asp Leu Ile  
 485 490 495  
 Phe Ile Tyr Lys Trp Lys Thr His Met Asn Asn Leu Asp Asn Ile Asn  
 500 505 510  
 Gln His Asn Asn Lys Tyr Lys Asn Lys His Asn Asn Asn Met Tyr Ile  
 515 520 525  
 Lys Thr Asp Lys Val Lys Asp Asn Asn Val Leu Phe Pro Phe Ser Leu  
 530 535 540  
 Ile Lys Asp Asp Ile Phe Arg His Ile Glu Asp Tyr His Phe His His  
 545 550 555 560  
 Ile Lys Asp Ile Ile Tyr Ile Cys Tyr Lys Asn Lys Leu Tyr Glu Tyr  
 565 570 575  
 Lys Leu Phe His Lys Ile Ile Asn His Leu Ile Asn Asn Ile Asn Lys  
 580 585 590  
 Ile Cys Ser Lys Tyr Leu Val Thr Ile Ile Ile Leu Leu Tyr Asn Lys  
 595 600 605  
 Leu Asn Cys Lys Thr Gln Leu Lys Glu Leu Leu Phe Ile Leu Leu Asn  
 610 615 620  
 Asn Tyr Arg Pro Ser Leu Lys Gln Arg Asn Lys Arg Asn Asn Ile Ser  
 625 630 635 640  
 Ile Asn Asn Ile Tyr Leu Lys Asn Ile Asn Lys Lys Tyr Ile Lys Lys  
 645 650 655  
 Lys Lys Lys Lys Lys Lys Tyr Ile Tyr Ile Tyr Thr Ile Cys Lys Lys  
 660 665 670  
 Lys Asn Asn Val Gly Asn Ile His Lys His Asn Val Met Met Thr Ser  
 675 680 685  
 Asn His Asn Asn Ile Leu Phe Arg Ser Phe Glu Tyr Val Lys Val His  
 690 695 700  
 Lys Leu Leu Leu Phe Ile Asn Ile Leu Ile Lys Ser Asn Ile Tyr Ile  
 705 710 715 720

Asn Tyr Glu Trp Ser Leu Tyr Phe Leu Ser Leu Ile Lys Gln Lys His  
 725 730 735  
 Ala Phe Ile Lys Lys Lys Gly Phe Tyr Ile Leu Cys Tyr Ile Leu Phe  
 740 745 750  
 His Ile Gln Asn Asn His Ile Ile Tyr Lys Ser Tyr Glu His Ile Phe  
 755 760 765  
 Asn Pro Tyr Asn Lys Tyr Asn Ile Tyr Asn Ile Tyr Asn Ile Ile Lys  
 770 775 780  
 Cys Thr Leu Pro Gln Ile Leu Gly Thr Ser Asn Ile Tyr Ser Leu Ile  
 785 790 795 800  
 Tyr Val Ala Phe Leu Tyr Ser Thr Asn Asn Thr Ile Asn Phe Ile Lys  
 805 810 815  
 Ile Phe Phe Thr Ile Ile Gln Lys Phe Tyr Asp Ser Ser Met Ile Lys  
 820 825 830  
 Gln Ile Gln Asn Asp Lys Asn Asn Tyr Gln His Ile Ser Cys His Asn  
 835 840 845  
 Tyr Ser Pro Lys Lys Asp Asn Ser Glu Tyr Tyr Ile Pro Asp Asp His  
 850 855 860  
 Asn Lys Leu Leu Tyr Asn Tyr Ser Tyr Asn Gln Leu Tyr Glu Lys Asn  
 865 870 875 880  
 His Phe Asn Asp Asp Asn Ile Phe Ile His Asp Leu Lys Ile Tyr Glu  
 885 890 895  
 Arg Asn Ile Asn Asn Lys Tyr Gln Lys Ile Lys Asp Lys Lys Lys Ile  
 900 905 910  
 Tyr Ala Phe Lys Asn Lys Ile Asn Leu Ile Asn Ile Pro Leu Ile Cys  
 915 920 925  
 Asn Asn Val Lys Glu His Phe Ser Phe Asn Pro Tyr Val Asn Asn Ile  
 930 935 940  
 Lys Tyr Gln Thr Arg Thr Pro Glu Asn Ile Ser Lys Leu Met Tyr Ile  
 945 950 955 960  
 Asn Asn Ser Gln Glu Phe Gln Asn Thr Gln Lys Asp Asn Phe Pro His  
 965 970 975  
 Ile Leu Asn Tyr Ser Leu Tyr Thr His Ile Lys Asn Asn Pro Ile Lys  
 980 985 990  
 Lys Asn Gln Thr Asn Asn Leu Tyr Ile Lys Asn Asp Tyr Tyr Asn Gln  
 995 1000 1005  
 Gln Glu Lys Glu Ile Asp Lys Ser Cys Ile Asn Asn Lys Phe Glu Thr  
 1010 1015 1020  
 Ile Asn Asn Tyr Tyr Asn Ile Tyr Thr His Asn Leu Phe Asn Arg Val  
 1025 1030 1035 1040  
 His Lys Ser Arg Leu Ile Leu Ile Leu Ile Tyr His Phe Leu Phe Ile  
 1045 1050 1055  
 Ile Ser Ser Asn Asn Leu His Asn Asn Asn Asn Asn Ile Ile Tyr Asn  
 1060 1065 1070  
 Asn Ile Asn Asn Ile Gln Lys Ser Asn Ser Val Asn Thr Asn Phe Thr  
 1075 1080 1085  
 Asn Ile Lys Glu Asp Ser Leu Leu Tyr Lys Ile Lys Asn Lys Tyr Leu

1090

1095

1100

Phe Leu Leu Tyr Gln Thr Tyr Met Ile Cys Ile Ser Tyr Ile Asn Met  
 1105 1110 1115 1120

Ser Leu Lys Ile Thr Lys Asn Met Asn Asn Asn Lys Asn Ala Gln Ser  
 1125 1130 1135

Ser Lys Met His Lys Gln Ile Phe Ser His Ile Ser Glu Leu Val Gln  
 1140 1145 1150

Asn Lys Asp Lys Tyr His Met Val Asn Glu Tyr Ala His Tyr Pro Tyr  
 1155 1160 1165

Glu Ile Asp Ile Cys Ile Lys Arg Leu Ile Thr Lys Asn Lys  
 1170 1175 1180

&lt;210&gt; 147

&lt;211&gt; 213

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 147

Met Asn Lys Asn Lys Lys Lys Lys Lys Lys Thr Asn His Val Ile Val  
 1 5 10 15

Glu Asn Ile Gln Lys Glu Cys Ser Phe Val Leu Lys Lys Glu Asn Asn  
 20 25 30

Asp Ile Tyr Val Ser Asn Asn Lys Pro Ile Gln Ile Tyr Asn Asp Arg  
 35 40 45

Ile Ile Lys Leu Leu Asn Glu Arg Thr His Lys Asn Val Glu Glu Ile  
 50 55 60

Ile Glu Gly Asp Tyr Lys Asp Leu Asn Lys Asn Lys Tyr Ile Asn Asp  
 65 70 75 80

Thr Val Tyr Ile His Ala Val Gly Ile Asn Ile Leu Lys Ala Ser Tyr  
 85 90 95

Ile Ile Gln Asp Leu Phe Ser Tyr Tyr His Glu Phe Val Lys Ser Ile  
 100 105 110

Gln Glu Pro Thr Ile Ser His Asn Lys Asn Asn Asn Asn Ile Leu  
 115 120 125

Glu Lys Lys Lys Lys Lys Glu Glu Lys Lys Lys Asn Pro Leu Arg Tyr  
 130 135 140

Ile Asp Ile His Ile Glu Cys Asn Thr Leu Ile Met Asn Asp Asn Ile  
 145 150 155 160

Ile Thr Asn Ile Tyr Asp Met Asp Gln His Phe Asn His Asn Lys Asn  
 165 170 175

Asn Asp Asp Asp Lys Ser Phe Tyr Asp Glu Tyr Asp Asn Leu Ile Lys  
 180 185 190

Phe Ala Ser Met Lys Tyr Asp Pro Leu Lys His Lys Tyr Leu Glu Val  
 195 200 205

Arg Lys Leu Lys Lys  
 210

&lt;210&gt; 148

&lt;211&gt; 1351

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 148

Met Phe Tyr Val Pro Gln Asn Ile Ser Asn Ile Ser Asn Arg Ile Asn  
 1 5 10 15  
 Lys Tyr Lys Ile Asn Tyr Leu Thr Thr Cys Arg Ser Tyr Asn Lys Ile  
 20 25 30  
 Phe Cys Leu Ile His Lys Ser Ile Ser Ser Ser Lys Arg Asn Ile Asn  
 35 40 45  
 Asn Ile Arg Thr Val Asp Thr Phe Thr Asp Lys Gln Ile Tyr Asp Glu  
 50 55 60  
 His Val Lys Leu Leu Lys Cys Val Leu Arg Leu Glu Lys Asp Phe Leu  
 65 70 75 80  
 Phe Ile Leu Lys Ser Lys Lys Asn Lys Glu Cys Val Ile Asn Ser Asn  
 85 90 95  
 Asn Ile Tyr Tyr Asn Asn Asn Asn Asn Asn Ile Ile Asn Tyr Asp His  
 100 105 110  
 Ser Thr Lys Tyr Asn Gly Asp Asn Gly Asp Asp Ala Ala Ile Glu  
 115 120 125  
 Lys Cys Ser Pro Pro Leu Leu Asn Thr Asn Glu Lys Asn Ile Lys Lys  
 130 135 140  
 Asn Lys Ile Leu Leu Tyr Asn Lys Ile Lys Lys Leu Ile Asp Lys Lys  
 145 150 155 160  
 Cys Asn Asn Ile Met Ser Ile Leu Leu Asn Lys Ser Tyr Phe Thr Val  
 165 170 175  
 Leu Leu Ser Cys Val Asn Ile Ile Arg Asn Lys Asp Ile Phe Asn Ile  
 180 185 190  
 Tyr Leu Phe Lys Cys Leu Tyr Leu Asn Asn Gln Trp Ile His Ile Leu  
 195 200 205  
 Asn Tyr Asn Met Val Val Ser Leu Phe Leu Asn Val Ser Thr Leu Tyr  
 210 215 220  
 Cys Glu Glu Glu Lys Ile Asn Lys Tyr Arg Asn Thr Tyr His Lys Arg  
 225 230 235 240  
 His Pro Tyr His Ile Leu Ile Tyr Asn Phe Leu Cys Ile Glu Asn Ile  
 245 250 255  
 Cys Asn Val Tyr Lys Asn Ile Leu Gln Val Ile Ile Pro Leu Leu Ile  
 260 265 270  
 Ile Cys Asp Lys Lys Leu Asp Ser Thr Leu Ser Phe Asn Asn Leu Ile  
 275 280 285  
 Lys Ile Ile Ile Met Phe Phe Lys Ile His Arg Arg Asn Ala Leu Leu  
 290 295 300  
 Val Thr His Ser Asn Ile Glu Glu Leu Ile Ile His Lys Arg Ile Ser  
 305 310 315 320  
 Phe Leu Ile Tyr Lys Met Asn Arg Gly Asn Asn Asn Ile Gln His Asp  
 325 330 335  
 Asp Ile Asn Asn Glu Thr Asn Asp Val Lys Asn Asn Ile Tyr Gly Arg  
 340 345 350  
 Lys Lys Lys Asn Lys Asn Ile Tyr Gly Asn Asn Asn Asn Asn Asn Asn

355					360					365					
Asn	Asn	Asn	Asn	Lys	His	Met	Asn	Lys	Ser	Ile	Ser	Thr	Asn	Ile	Leu
370						375					380				
Asn	Lys	Tyr	Ile	Lys	Asn	Glu	His	Ile	Val	Thr	Lys	His	Val	Ile	Arg
385					390					395					400
Thr	Asp	Glu	Lys	Lys	Lys	Glu	Leu	Phe	Phe	Cys	Thr	Phe	Val	Asn	Met
				405					410					415	
Thr	Thr	Leu	Leu	Tyr	Glu	Ile	Ile	Leu	Phe	Tyr	Lys	Asn	Ile	Ser	Thr
			420					425					430		
Asn	Asn	Ile	Lys	Ile	Asn	Tyr	Glu	Tyr	Ile	Asp	Asp	Thr	Trp	Asn	Asn
		435					440					445			
Ile	Ile	Thr	Asn	Ile	Ile	Ile	Tyr	Ile	Lys	Asn	Asn	Ile	Pro	Met	Glu
		450					455					460			
Arg	Ile	Lys	Lys	Glu	Thr	His	Leu	Gln	Ser	Ile	Ile	Ser	Leu	Leu	Tyr
465						470					475				480
Ser	Leu	Thr	Val	Leu	Asn	Tyr	Ser	Lys	Leu	Tyr	Glu	Asn	Ile	Phe	Tyr
				485					490					495	
Ile	Phe	Glu	Arg	Ser	Val	Asp	Ile	Ile	His	Asp	Leu	Phe	Lys	His	Asn
			500					505					510		
Met	Arg	Lys	Ile	Asn	Ile	Met	Thr	Phe	Asp	Glu	Leu	Lys	Asn	Asp	Leu
		515					520					525			
Asn	Val	Ser	Phe	Val	Asn	Met	Cys	Asn	Asp	Asp	Asn	Asn	Asn	Asn	Asn
						535					540				
Asp	Asp	Asp	Asn	Asn	Gly	Asp	Asp	Asp	Asn	Asn	Asn	Asn	Asp	Asp	Asn
545					550					555					560
Asn	Gly	Asp	Asp	Asn	Asn	Asp	Asp	Asn	Asn	Val	Ile	Lys	Tyr	Lys	His
				565				570						575	
Ser	Asn	Val	Glu	Pro	Lys	Lys	Tyr	Asn	Lys	Val	Lys	Tyr	Asn	Met	Tyr
			580					585					590		
Asn	Thr	Phe	His	Arg	Asn	Ile	Lys	Phe	Lys	Tyr	Lys	Gln	Asn	Ile	Val
			595				600					605			
His	Asn	Tyr	Leu	Asn	Lys	Ile	Asp	Pro	Leu	Leu	Tyr	Asn	Asn	Phe	Leu
			610			615					620				
Phe	Val	Tyr	Val	Pro	Asp	Leu	Leu	Tyr	Ser	Gln	Asp	Asn	Cys	Thr	Asp
625					630					635					640
Met	Phe	Thr	Leu	Asp	Glu	Leu	Thr	Lys	Leu	Leu	Tyr	Ala	Leu	Ser	Tyr
				645					650					655	
Tyr	Gln	Lys	Glu	Ile	Glu	Lys	Gln	Lys	Lys	Asn	Asn	Lys	Arg	Lys	Ile
			660					665					670		
Tyr	His	Ile	Lys	Asp	Ile	Ile	Ile	Ser	Leu	Leu	Pro	Tyr	Val	Asn	Thr
			675				680					685			
Ile	Val	Glu	Arg	Gln	Ile	Phe	Lys	Leu	Leu	Val	Asn	Lys	Asn	Asn	Asn
			690				695				700				
Ile	Cys	Ser	Lys	Ile	Lys	Asn	Ile	Glu	Thr	Cys	Asn	Leu	Asn	Ile	Tyr
705					710					715					720
Asn	Asn	Val	Asp	Pro	Val	Val	Tyr	Lys	Asn	Lys	Leu	Ala	Val	Gly	Lys
				725					730					735	



Met Glu Lys Asn Asn Tyr Asp Lys Asn Thr Cys Ser Ile Leu Ser Ser  
 740 745 750  
 Tyr Lys Asn Tyr Leu Asn Ile Cys Asn Asp Asn Thr Tyr Val Ala His  
 755 760 765  
 Ser Ser Ile Tyr Cys Ile Glu Lys Asn Leu Ser His Leu Leu Asn Ile  
 770 775 780  
 Tyr Tyr Gln His Lys Ile Val Asp Ile Lys Met Phe Tyr Ile Leu Thr  
 785 790 795 800  
 Phe Leu Leu Ala Met Pro Lys Lys Lys Tyr Ile Asp Leu Ile Ile Phe  
 805 810 815  
 Ser Asn Ile Ile Asn Ala Leu Ser Lys Met Cys Tyr Thr Tyr Glu Met  
 820 825 830  
 Tyr Val Val Leu Phe Tyr Phe Val Asn Lys Val Cys Gly Ile Arg Ile  
 835 840 845  
 Ser Glu Tyr Val Leu Ser Lys Tyr Phe Phe Arg Asn Gly Leu Val Leu  
 850 855 860  
 Lys Thr Val Glu Glu Glu Glu Lys Glu Glu Glu Glu Glu Lys Glu Lys  
 865 870 875 880  
 Glu Lys Glu Glu Glu Glu Glu Asp Glu Lys Glu Glu Glu Glu Asp Lys  
 885 890 895  
 Glu Lys Glu Lys Glu Glu Glu Lys Glu Glu Glu Lys Asp Lys Glu Glu  
 900 905 910  
 Glu Asp Glu Lys Asp Lys Glu Lys Glu Lys Glu Glu Glu Ile Gln Lys  
 915 920 925  
 Lys Val Lys Lys Glu Ile Gln Lys Lys Val Lys Lys Glu Asn Gln Lys  
 930 935 940  
 Lys Val Lys Lys Glu Asn Gln Tyr Glu Glu Lys Lys Lys Gly Gly Ala  
 945 950 955 960  
 Asn Lys Ile Leu Pro Phe Tyr Ile Trp Arg Ser Phe Leu Lys Asn Ile  
 965 970 975  
 Gln Phe Asn Val Lys Asp Gln His Met Leu Asn Ser Leu Val Pro Ala  
 980 985 990  
 Tyr Val Cys Lys Gly Ser Glu Val Asn Phe Ser Arg Asn Arg Lys Asn  
 995 1000 1005  
 Asn Tyr Ser Asn Asn Asn Glu Ser Ser Glu Lys Ile Asp Val Tyr Asn  
 1010 1015 1020  
 Lys Thr Tyr Glu Ile Lys Lys Asn Lys Asn Met Tyr Lys Lys Ile Ser  
 1025 1030 1035 1040  
 Ser Asn Asp Lys Tyr Met Phe Lys Asn Glu Lys Glu Lys Phe Asn Phe  
 1045 1050 1055  
 Ile Cys Leu Asn Thr Leu Leu Asn Tyr Met Ser Tyr Thr Asn Asp Ile  
 1060 1065 1070  
 Gln Tyr Tyr Asn Ile Lys Val His Leu Ile Lys Met Ile Lys Asn Ile  
 1075 1080 1085  
 Ile Ile Lys Asp Glu Lys Lys Ile Asp Val Arg Leu Leu Cys Ser Ile  
 1090 1095 1100

Phe Ile Ser Tyr Thr Arg Leu Asn Ile Tyr Asp Lys Ile Leu Phe Tyr  
 1105 1110 1115 1120  
 Asn Ile Tyr Lys Lys Leu Gln Thr Gln Lys Leu Asn Phe Gly Asn Ile  
 1125 1130 1135  
 Ile Ser Ile Leu Ser Tyr Met Asn Lys Thr Ala Ile Tyr Asp Lys His  
 1140 1145 1150  
 Ile Leu Phe Thr Cys Cys Lys Asp Ile Phe Lys Lys Ile Asn Asp Lys  
 1155 1160 1165  
 Asn Ile Ile Gln Asn Asn Gln Leu Ser His Leu Ile His Phe Leu Phe  
 1170 1175 1180  
 Ile Leu Thr Ser Ile Ser Gln Leu Phe Leu Phe Asn Lys Phe His Ile  
 1185 1190 1195 1200  
 Val Leu Ser Tyr Ile Phe Arg Ile Leu Tyr Tyr Ile Tyr Val Tyr Ile  
 1205 1210 1215  
 Asn Asn Gln Leu Ile Ile Thr Lys Lys Lys Lys Lys Asn Gln Ser Phe  
 1220 1225 1230  
 Gln His Val Asn Ile Asn Ile Ser Ser Val Ile Thr Thr Pro Leu Pro  
 1235 1240 1245  
 Lys Asn Phe Ile Ser Met Phe Asp Ile Ser Leu Asn Ile Leu Tyr His  
 1250 1255 1260  
 Phe Phe Leu Leu Ile Pro Leu His Asn His Lys Asn Val Ile Glu Cys  
 1265 1270 1275 1280  
 Val Asn Ile Ser His Leu Asn Ile Leu Asn Ser Leu Leu Ser Tyr Lys  
 1285 1290 1295  
 Tyr Lys His Lys Tyr His Val Ala Pro Thr Pro Ser Asp Ile Gln Arg  
 1300 1305 1310  
 Ser Val Leu Asn Ile Val Asn Lys Met Leu Leu Gly His Gly Asn Ile  
 1315 1320 1325  
 Lys Val Ser Tyr Glu Tyr Lys Met His Asn Met Pro Tyr Gln Ile Asp  
 1330 1335 1340  
 Ile Leu Ile Ile Lys Gly Val  
 1345 1350

&lt;210&gt; 149

&lt;211&gt; 722

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 149

Met Glu Asn Asn Pro Tyr Val Phe Lys Ser Leu Val Asn Ile Tyr Glu  
 1 5 10 15

Glu Tyr Leu Asn Leu Ile Ile His Arg Val Lys Gly Tyr Lys Val Leu  
 20 25 30

Val Leu Asp Asp Glu Thr Lys Ser Ile Ile Ser Leu Ile Phe Ser His  
 35 40 45

Ser Tyr Ile Leu Glu Lys Glu Ile Phe Leu Thr Leu Asn Phe Asn Asp  
 50 55 60

Lys Asn Ile Phe Glu Asp Ile Tyr Asn Asn Asn Asn Asp Lys Lys Glu  
 65 70 75 80

Asn Phe Asp Phe Met Asn Tyr Lys Ile Lys Asn Leu Lys His Leu Lys  
 85 90 95  
 Val Ile Phe Leu Leu Arg Pro Thr Tyr Thr Asn Ile Leu Arg Leu Met  
 100 105 110  
 Ser Glu Leu Lys Lys Pro Leu Phe Ser Glu Tyr Tyr Ile Phe Phe Thr  
 115 120 125  
 Asn Thr Ile Asn Asp Ile Tyr Ile Glu Lys Leu Ala Lys Ala Asp Glu  
 130 135 140  
 Phe Asp Val Ile Lys Asn Ile Ile Glu Tyr Tyr Ile Asp Thr Tyr Val  
 145 150 155 160  
 Leu His Asp Tyr Leu Phe His Leu Asn Ile Asp Tyr Thr Ser Phe Leu  
 165 170 175  
 Tyr Lys Asn Asp His Lys Phe Ile Asp Lys Glu Lys Lys Lys Lys Glu  
 180 185 190  
 Leu Asn Tyr Phe Lys Gln Tyr Asn Asn Asn Asn Ile Asn Ser Asn  
 195 200 205  
 Asn Asn Tyr Ser Ser Asp Gly Arg Tyr Glu Lys Leu Thr Ile Glu Glu  
 210 215 220  
 Phe Asn Lys Leu Glu Gly Asn Asn Asn Met Ile Tyr Asp Asn Asn Asn  
 225 230 235 240  
 Asn Asn Asn Asn Asn Asn Asn Ile Asn Ser Gly Asn Ile Asn Tyr Ser  
 245 250 255  
 His Phe Asn Leu Ser Ile Glu His Ile Asn Asn Asp Asn Arg Asn Asn  
 260 265 270  
 Ser Asn Ile Thr Leu Tyr Met Asn Gln Ile Val Gln Arg Ile Ile Asp  
 275 280 285  
 Gly Leu Phe Ser Phe Leu Cys Cys Ile Arg Gln Val Pro Asp Val Ile  
 290 295 300  
 Tyr Asn Arg His Ser Lys Ile Cys Lys His Ile Ile Asp Met Leu Lys  
 305 310 315 320  
 Glu Lys Met Leu Arg His Gln Ser Val Phe Asn Asn Ile Leu Asp Ile  
 325 330 335  
 Tyr Glu Lys Tyr Asn Asp Glu Met Glu Arg Lys Lys Lys Lys Lys Ile  
 340 345 350  
 Leu Glu Thr Asn Asn Glu Pro Asn Tyr Gln Phe Asn His Leu Ile Asn  
 355 360 365  
 Gln Asn Ile His Glu Ile Thr Glu Gly Asp Ala Cys Tyr Phe Leu Ile  
 370 375 380  
 Leu Asp Arg Asn Glu Asp Pro Ile Thr Pro Leu Leu Thr Gln Trp Thr  
 385 390 395 400  
 Tyr Gln Ser Met Leu His Glu Leu Ile Gly Ile Glu Asn Asn Lys Ile  
 405 410 415  
 Asn Leu Asn Cys Asn Asn Lys Glu Glu Glu Gln Gln Gln Ile Val Met  
 420 425 430  
 Ser Cys Asn Tyr Asp Asp Phe Tyr Asn Glu His Leu Phe Asp Asn Phe  
 435 440 445  
 Gly Asp Leu Gly Gln Ala Val Lys Asn Tyr Val Asp Ile Tyr Gln Glu

450

455

460

Glu Thr Ser Lys Lys Thr Asn Leu Glu Ser Ile Asp Asp Ile Gln Lys  
 465 470 475 480  
 Phe Ile Asp Ile Tyr Pro Asn Tyr Lys Lys Leu Ser Gly Asn Val Thr  
 485 490 495  
 Lys His Val Asn Ile Leu His Lys Phe Ser Asp Ile Val Gln Lys Arg  
 500 505 510  
 Gln Leu Phe Tyr Ile Ser Glu Leu Glu Gln Ser Ile Ala Cys Tyr His  
 515 520 525  
 Thr Lys Asn Asp His Phe Lys Gln Val Ile Asp Thr Ile Lys Asn Tyr  
 530 535 540  
 Thr Tyr Thr Asn Tyr Asp Val Leu Arg Leu Ser Leu Leu Tyr Ser Leu  
 545 550 555 560  
 Lys Tyr Ala Asp Glu Gln His Ile Asn Val Ile Lys Asn Glu Leu Ala  
 565 570 575  
 Lys Arg Asn Ile Gln Lys Asp Gln Ile Leu Leu Ile Asp Ala Leu Leu  
 580 585 590  
 Leu Tyr Ser Ser Gln Gln Thr Lys Tyr Asn Gln Leu Phe Lys Glu Gln  
 595 600 605  
 Thr Phe Leu Asn Leu Ala Lys Thr Thr Ile Thr Arg Thr Ile Lys Gly  
 610 615 620  
 Thr Ser Asn Val Phe Thr Leu His Lys Ser Tyr Leu Tyr Tyr Leu Leu  
 625 630 635 640  
 Glu Asp Ile Ile Lys Tyr Lys Ile Asn Thr Gln Leu Tyr Thr Thr Thr  
 645 650 655  
 Asn Leu Leu His Thr Glu Pro Thr Leu Asn Lys Lys Ile Asn Ser Ile  
 660 665 670  
 Val Val Phe Phe Ile Gly Gly Ala Thr Tyr Glu Glu Tyr Arg Asp Val  
 675 680 685  
 Gln His Leu Ser Lys Lys Tyr Asn Ile Ser Ile Val Leu Gly Ser Thr  
 690 695 700  
 His Met His Asn Ser Gln Ser Phe Leu Ala Asp Val Leu Gln Leu Ile  
 705 710 715 720  
 Lys Lys

&lt;210&gt; 150

&lt;211&gt; 1398

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 150

Met Ile Tyr Ser Arg Leu Asn Glu Ile Met Lys Lys Lys Lys Lys Lys  
 1 5 10 15  
 Arg Arg Arg Lys Lys Lys Leu Val Thr Asn Ile Pro Leu Cys Asn Asn  
 20 25 30  
 Asn Phe Ser Tyr Cys Lys Glu Asn Gln Glu Arg Phe Ile Leu Ile Asp  
 35 40 45  
 Thr Leu Lys Lys Lys Lys Leu Phe Lys Lys Ser Ile Leu Lys Lys Ile

50					55					60					
Lys 65	Asn	Gln	Lys	Asp	Leu 70	Met	Asn	Met	Ile	His 75	Ile	Lys	Ser	Lys	Lys 80
His	Gln	Leu	Ile	Asn 85	Phe	Ser	Ser	Tyr	Tyr 90	Ile	Lys	Phe	Ile	Lys 95	Pro
Leu	Phe	Asn	Lys 100	Asn	Lys	Tyr	Tyr	Asn 105	Lys	Ser	Leu	Tyr	Lys 110	Asn	Met
Lys	Ile	Val 115	Val	Asp	Ile	Asn	Glu 120	Asn	Val	Cys	Ile	Tyr 125	Asn	Asp	His
Tyr 130	Ile	Phe	Val	Tyr	Ile	Ile 135	Lys	Asp	Tyr	Asn	Ile 140	Tyr	Glu	Arg	Leu
Lys 145	Tyr	Lys	Asn	Phe	Lys 150	Cys	Ser	Leu	Phe	Ser 155	Ser	Asp	His	Met	Phe 160
Tyr	Leu	Arg	Lys	Glu 165	Asn	Phe	Tyr	Phe	Phe 170	Tyr	Thr	Phe	Tyr	Phe 175	Glu
Leu	Phe	Ile	Asn 180	Ser	Tyr	Leu	Tyr	Asn 185	Arg	Tyr	Val	Cys	Leu 190	Lys	Lys
Tyr	Asn	Asp 195	Lys	Cys	Lys	Ile	Lys 200	Lys	Asn	Glu	Glu	Asn 205	Tyr	Glu	Gln
Ala	Asp 210	Glu	Asp	Glu	Glu	Lys 215	Lys	Phe	Val	His	Tyr 220	Lys	Ile	Gly	Gly
Asn 225	Tyr	Phe	Ile	Asn	Asp 230	Glu	Ala	Asp	His	Met 235	Lys	Lys	Thr	Lys	Ile 240
Leu	Ile	Asp	Ser	Asn 245	Glu	Tyr	Asn	Lys 250	Asn	Tyr	Val	Asn	Ile	Phe 255	Asn
Ser	Thr	Phe	Val 260	Tyr	Lys	Asn	Tyr	Met 265	Asp	Val	Glu	Cys	Thr 270	Asn	Thr
Phe	Leu	His 275	Asn	Asn	Asn	Asn	Asn 280	Lys	Tyr	Asp	Asn	Asn 285	Cys	Asn	Asn
Asn 290	Asn	Lys	Tyr	Asp	Asn	Asn 295	Cys	Asn	Asn	Asn	Asn 300	Lys	Tyr	Asp	Asn
Asn 305	Cys	Asn	Asn	Asn	Lys 310	Tyr	Asp	Tyr	Tyr	Tyr 315	Ser	Ser	Glu	Gln	Tyr 320
Tyr	Lys	Phe	Pro	Pro 325	Leu	Val	Asn	Ile	Gln 330	Ile	Asn	Val	Val	Glu 335	Ile
Phe	Asn	Phe	Val 340	Cys	Thr	Glu	Asn	Ser 345	Asp	Asp	Ile	Asn	Val 350	Ile	Phe
Lys	Ile	Lys	Asp	Glu	Tyr	Gly	Lys 360	Lys	Arg	Arg	Ala	His 365	Thr	Asn	Arg
Ile 370	Asn	Thr	Glu	Gln	Gln	Lys 375	Lys	Arg	Asp	Ser	Asn 380	Lys	Ile	Ile	Lys
Arg 385	Arg	Asn	Asn	Arg	Asn 390	His	Gln	Ile	Asn	Thr 395	Pro	Asn	Gln	Leu	Ser 400
Asn	Asn	Met	Ile	Ile 405	Lys	Lys	Lys	Lys	Lys 410	Lys	Lys	Lys	Asn	Leu 415	Ile
Met	Lys	Lys	Tyr 420	Leu	Val	Ile	Gly	Thr 425	Lys	Asn	Gly	Met	Ile 430	Ile	Ile

Asn	Asp	Phe	Leu	Lys	Pro	His	Lys	Ile	Ile	His	Leu	Glu	Lys	Ile	Cys
		435					440					445			
Asn	Glu	Pro	Ile	Val	Ser	Ile	Phe	Ile	Phe	Gln	Asn	Asp	Met	Leu	Ile
	450					455					460				
Leu	Asn	Arg	Ser	Gly	Ile	Ile	Phe	Phe	Met	Asp	Ile	His	Asn	Phe	Val
465					470					475					480
Ile	Tyr	Arg	Asp	Ile	Asp	Ile	Phe	Phe	Ser	Leu	Glu	His	Lys	Thr	Lys
				485					490					495	
Asn	Leu	Ser	Tyr	Glu	Asn	Cys	Asn	Asn	Asn	Ile	Lys	Arg	Asn	Cys	Thr
			500					505					510		
Tyr	Asn	Ser	Glu	Glu	Thr	Thr	Gln	Phe	Ile	Asn	Gly	Lys	Lys	Ile	Cys
		515					520					525			
Asn	Gly	Lys	Lys	Met	Cys	Asp	Gly	Lys	Lys	Ile	Arg	Asp	Asp	Asp	Glu
	530					535					540				
Thr	Phe	Glu	Asp	Ser	Thr	Asn	Leu	Ala	Tyr	His	His	Ser	Asn	Asn	Leu
545					550					555					560
Pro	Cys	Asp	Thr	Phe	Glu	Gly	Lys	Arg	Ile	Val	Asn	Arg	Met	Cys	Asn
				565					570					575	
Lys	Lys	Tyr	Asn	Tyr	Asp	Tyr	Lys	Glu	Ser	Tyr	Arg	Thr	Leu	Lys	Lys
			580					585					590		
Arg	Tyr	Ile	Asn	Ser	Phe	Cys	His	Leu	Asn	Met	Tyr	Thr	Ile	Leu	Ile
		595					600					605			
Gly	Thr	Thr	Tyr	Asn	Glu	Ile	Ile	Ile	Tyr	Asn	Leu	Leu	Cys	Asp	Glu
	610					615					620				
Leu	Cys	Tyr	Ile	Tyr	Asp	Lys	Asn	Asn	Lys	Lys	Ile	Ser	Ser	Tyr	Asn
625					630					635					640
Ile	His	Asn	Asn	Asn	Ile	Ile	Tyr	Ser	Ile	Glu	Asn	Cys	Leu	Tyr	Lys
			645						650					655	
Met	Asn	Leu	Lys	Asn	Tyr	Asp	Thr	Ile	Lys	Leu	Leu	Cys	Leu	Pro	Thr
			660					665					670		
Ile	Tyr	Ile	Ser	Ser	Phe	Val	Phe	Tyr	Ser	Asp	Asn	Leu	Leu	Ile	Cys
		675					680					685			
Gly	Ser	Phe	Lys	Gly	Asn	Leu	Tyr	Phe	Ile	Asp	Ile	Cys	Asn	Asn	Asn
	690					695					700				
Asn	Ile	Lys	Ile	Ile	Asn	Arg	Ile	Arg	Lys	Glu	Asp	Phe	Val	Gly	Lys
705					710					715					720
Gln	Arg	Met	Arg	Ile	His	Lys	Glu	Lys	Glu	Ile	Leu	Phe	Val	Phe	Lys
				725					730					735	
Lys	Lys	Ile	Ile	Asn	Asn	Lys	Tyr	Ile	Ile	Asn	Lys	Thr	Lys	Ser	Asp
			740					745					750		
Asn	Ser	Val	Lys	Ile	Tyr	Asn	Glu	Gln	Asp	Met	Lys	Lys	Asn	Asn	Lys
		755					760					765			
Ile	Ile	Ser	Ile	His	Leu	Asn	Lys	His	Lys	Asn	Ile	Leu	Ile	Cys	Ser
	770					775					780				
Phe	Thr	Tyr	Cys	Ile	Tyr	Ile	Tyr	Lys	Leu	Asn	Ile	Ser	Gly	Asn	Glu
785					790					795					800

Lys Ile Asp Leu Arg Cys Ile Ser Tyr Leu Ser Ile Lys Asn Ile Ile  
 805 810 815  
 His Ile His Val Ile Lys Asn Met Asp Asn Leu Phe Tyr Ile Thr Thr  
 820 825 830  
 Arg Asp Asp Glu Asn Ile Ser Ser Tyr Asn Tyr Tyr Leu Cys Ser Met  
 835 840 845  
 Asn Pro Cys Lys Ile Lys Thr Asn Lys Met Glu Pro Leu Tyr Phe Asn  
 850 855 860  
 Ile Leu Phe Glu Asn Thr Trp Phe Tyr Glu Phe Phe Tyr Tyr Asn His  
 865 870 875 880  
 Lys Asp Asp Asn Gln Phe Leu Phe Val Glu Asn Asn Trp Asn Asp Glu  
 885 890 895  
 Arg Lys Asn Lys Ser Leu Ile Leu Leu Asp Asp Ser Ile Phe Ile Ile  
 900 905 910  
 Tyr Thr Tyr Cys Ile Asn Lys Ser Arg Gln Ser Phe Glu Asp Thr Tyr  
 915 920 925  
 Tyr Lys Gln Asn Asn Leu Met Asn Val Asn Asn Thr Ser His Val Ile  
 930 935 940  
 Lys Arg Asn Glu Tyr Ile Gly Gly Lys Gln Lys Ile Tyr Lys Asn Asn  
 945 950 955 960  
 Lys Asn Asn Glu Ser Thr Val Asn Thr Ser Cys Asp Asp Tyr Leu Gly  
 965 970 975  
 Ser Thr Asn Gln Val Lys Asn Thr Phe Pro Phe Asn His Asn Asn Asn  
 980 985 990  
 Asn Lys Lys Lys Asn Lys Glu Lys Lys Thr Asn Ile Ile His Gly Lys  
 995 1000 1005  
 Arg Asn Glu Gln Met Asp Asn Ser Phe Asn Lys Phe Leu Ser Leu Ile  
 1010 1015 1020  
 His Thr Asn Asn Asn Ser Lys Ala His Val Ser Asn Lys Ser Lys Lys  
 1025 1030 1035 1040  
 Tyr Asp Lys Ile Lys Ile Val Lys His Ile Pro Gln Val Val Lys Ser  
 1045 1050 1055  
 Phe Lys Arg Arg Thr Asn Met Cys Lys Met Asp Asn Arg Lys Lys Asp  
 1060 1065 1070  
 Ile Ser Leu Leu Ser Ile Ile Lys Asn Lys Glu Glu Lys Lys Lys Ile  
 1075 1080 1085  
 His Asp Ile His Ile Asn Gly Glu Ser Tyr Asn Val Val Ser Lys Gly  
 1090 1095 1100  
 Val Ser Ile Pro Val Met Leu Lys Asn Lys Leu Leu Asn Val Arg Tyr  
 1105 1110 1115 1120  
 Glu Lys Glu His Leu Lys Lys Lys Asn Glu Glu Lys Glu Asp Cys Ser  
 1125 1130 1135  
 Lys Asp Glu Phe Leu Lys Lys Met Lys Ile Ile Lys Lys Lys Lys Asn  
 1140 1145 1150  
 Asn Asn Asn Asn Lys Ile Asn Asn His Tyr Val Thr Tyr Lys Leu  
 1155 1160 1165  
 Leu Lys Ser Met Leu Lys Arg Lys Lys Asn Ile Tyr Leu Cys Glu Ser

1170

1175

1180

Lys Lys Leu Asn Cys Lys His Asp Asp Asp Ile Ile Lys Lys Asp Thr  
 1185 1190 1195 1200

Ser Phe Ile Arg Arg Gly Ile Asn Asn Glu Ser Tyr Ile Arg Asp Asp  
 1205 1210 1215

Ile Tyr Leu Gly Ile Asn Glu Lys Asn Glu Ile Gln Arg Lys Asn Phe  
 1220 1225 1230

Lys Pro Asn Ile Glu Val Asn Lys Glu Ile Ile Glu Ile Glu Gln Phe  
 1235 1240 1245

Cys Asn Arg Gly Gly Asp Leu Cys Val Ile Asn Asn Gly Glu Ile Asn  
 1250 1255 1260

Asn Leu Ser Tyr Cys Ile Asn Lys Glu Thr Lys Leu Arg Thr Lys Gly  
 1265 1270 1275 1280

Leu Gly Tyr Ile Gln Asn Tyr Leu Lys Lys Tyr Met Asn Thr Asp Ile  
 1285 1290 1295

Lys Met Lys Gly Glu Phe Arg Asp Asn Ile Asn Arg Ser Ser Asn Ser  
 1300 1305 1310

Ile Lys His Ile Asn Ser Asn Leu Tyr Lys Ile Ser Pro Gln Asn Ser  
 1315 1320 1325

Asp Thr Thr Asn Tyr Met Gly Glu Lys Asp Lys Phe Ile Asn Ser Tyr  
 1330 1335 1340

His Val Asn Asn Tyr Val His Ser Met Met Ile Arg Leu Pro Gln Arg  
 1345 1350 1355 1360

Glu Ser Val Thr Tyr Ile Glu Lys Lys Lys Lys Asn Lys Ile Asp Ile  
 1365 1370 1375

Thr Lys Tyr Asn Ala Tyr Thr Lys Leu Ile Lys Lys Gly Glu Gly Asp  
 1380 1385 1390

Lys Lys Lys Asn Leu Ile  
 1395

&lt;210&gt; 151

&lt;211&gt; 686

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 151

Met Gly Ile Ile Lys Arg Ile Leu Leu Leu Gln Ile Val Leu Val Leu  
 1 5 10 15

Val Leu Cys Cys His Arg Ile Arg Cys Glu Glu Val Ser Ser Ile Ser  
 20 25 30

Asn Lys Ala Ser Val Lys Asp Glu Gly Gln Asn Asn Asn Ser Asn Lys  
 35 40 45

Ser Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 50 55 60

Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 65 70 75 80

Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Thr  
 85 90 95

Ser Gly Leu Ser Val Lys Ser Glu Asn Phe Asn Met Ile Ile Lys Pro



100					105					110					
Glu	Gly	Asp	Glu	Gln	Ser	Pro	Leu	Asn	Ser	Leu	Ser	Val	Glu	Gln	Lys
		115					120					125			
Lys	Asp	Thr	Pro	Gln	Ile	Glu	Glu	Leu	Arg	Lys	Lys	Glu	Glu	Thr	Lys
	130					135					140				
Asp	Gln	Lys	Val	Thr	Glu	Gln	Val	Asn	Asn	Leu	Gln	Ser	Lys	Asn	Glu
145					150					155					160
Lys	Leu	Thr	Asn	Thr	Leu	Asp	Gln	Val	Val	Gln	Gly	Asp	Asn	Asn	Asn
				165					170					175	
Asn	Thr	Leu	Asp	Thr	Thr	Thr	Ser	Glu	Thr	Ser	Ser	Ser	Ser	Thr	Thr
			180					185						190	
Asn	Thr	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Ile	Asn	Asn	Asn	Ser	Asn	Ser
		195					200					205			
Asn	Asn	Asn	Asn	Ser	Asn	Ile	Asn	Asn	Asn	Asn	Asn	Ile	Asn	Asn	Asn
	210					215					220				
Asn	Asn	Asn	Ile	Tyr	Leu	Gly	His	Asn	Asn	Asn	Leu	Asp	Ser	Asn	Ile
225					230					235					240
Ile	Gln	Gln	Thr	Asn	Phe	Ile	Glu	Asn	Thr	Glu	His	Asn	Val	Gln	Lys
				245					250					255	
Gln	Asn	Glu	Lys	Lys	Glu	Asn	Asn	Asn	Thr	Ser	Gly	Ser	Thr	Ser	Lys
			260					265					270		
Ser	Ser	Ser	Ser	Gln	Asn	Leu	Glu	Asn	Ser	Lys	Glu	Val	Glu	Gln	Ala
		275					280					285			
Val	Val	Lys	Glu	Ile	Thr	Pro	Lys	Glu	Glu	Thr	Ser	Asn	Gly	Gln	Asn
	290					295					300				
Lys	Asp	Lys	Glu	Lys	Ile	Leu	Ser	Asn	Val	Gln	Asn	Asp	Ala	Thr	Asn
305					310					315					320
Lys	Lys	Met	Val	Asn	Asp	Asn	Thr	Lys	Gly	Leu	Ser	Ser	Asp	Asn	Met
				325					330					335	
Asn	Ser	Ser	Asn	Asp	Leu	Asn	Ala	Pro	Asn	Lys	Met	Asn	Glu	Asp	Ser
			340					345					350		
Lys	Gly	Ser	Ser	Glu	Tyr	Val	Asp	Leu	Ala	Ser	Gln	Lys	Ile	Tyr	Asp
		355					360					365			
Glu	Met	Asn	Lys	Asn	Val	Glu	Glu	Ser	Gly	Ser	Asn	Leu	Tyr	Phe	Leu
	370					375					380				
Lys	Leu	Leu	Ser	Ile	Gly	Ser	Ser	Ile	Phe	Met	Gln	Leu	Ile	Phe	Leu
385					390					395					400
Pro	Thr	Ile	Phe	Lys	Ile	Ile	Lys	Lys	Lys	Thr	Thr	Gly	Glu	Leu	Asp
				405					410					415	
Gly	Phe	Pro	Tyr	Ile	Ile	Leu	Leu	Leu	Ser	Ser	Phe	Leu	Trp	Leu	Val
			420					425					430		
Tyr	Gly	Met	Leu	Leu	Asn	Asn	Ser	Ala	Ile	Val	Phe	Pro	Asn	Leu	Val
		435					440					445			
Gly	Leu	Ile	Leu	Gly	Ile	Leu	Tyr	Cys	Val	Ile	Tyr	His	Lys	Asn	Cys
	450					455					460				
Lys	Asn	Met	Trp	Leu	Lys	Gln	Lys	Leu	His	Ser	Tyr	Tyr	Lys	Ile	Cys
465					470					475					480

Gly Phe Ile Cys Phe Leu Leu Tyr Ala Phe Leu Tyr Ile Leu Ser Tyr  
 485 490 495  
 Glu Gln Tyr Glu Val Phe Val Gly Phe Val Ala Phe Ile Ser Ser Ile  
 500 505 510  
 Val Asn Phe Gly Ala Pro Leu Ser Tyr Ile Gln Ile Val Ile Lys Lys  
 515 520 525  
 Lys Asn Ser Ser Leu Ile Pro Met Glu Val Thr Met Gly Ser Leu Leu  
 530 535 540  
 Cys Ser Phe Leu Trp Leu Thr Tyr Gly Phe Thr Leu Lys Asp Gly Phe  
 545 550 555 560  
 Ile Ile Ile Pro Asn Leu Cys Gly Phe Ile Leu Ser Leu Leu Gln Val  
 565 570 575  
 Leu Leu Ile Ile Leu Tyr Ser Asn Lys Glu Asn Thr Thr Phe Asn His  
 580 585 590  
 Asp Ser Asp Thr Thr Val Ser Glu Ile Ser Thr Arg Lys Asn Arg Asn  
 595 600 605  
 Lys Tyr Ile Pro Asp Thr Asn Ser Asn Met Phe Phe Asn Glu Tyr Asn  
 610 615 620  
 Val Asp Glu Glu Asn Arg Met Thr Glu Ile Ser Thr Thr Met Pro Thr  
 625 630 635 640  
 Thr Ile Phe Asp Leu Ser Phe Asp Glu Thr Ser Pro Leu Thr Gly Thr  
 645 650 655  
 Phe Asn Ile Asp Tyr Ser Arg Pro Gly Val Ser Asn Gln Lys Tyr Leu  
 660 665 670  
 Lys Arg Ser Glu Ser Leu Glu Lys Asn Thr Ala Ile Thr Phe  
 675 680 685

<210> 152  
 <211> 980  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 152  
 Met Lys Glu Leu Arg Lys Glu Leu Ile Leu Lys Lys Lys Asn Tyr Glu  
 1 5 10 15  
 Glu Leu Arg Leu Lys Leu Asn His Leu Glu Cys Val Glu Arg Asp Ser  
 20 25 30  
 Val Lys Ile Asn Ser Glu Lys Glu Lys Gly Glu Lys Val Ile Tyr Glu  
 35 40 45  
 Leu Lys Glu Lys Leu Asp Asn Asp Glu Lys Ile Ile Asn Asp Leu Lys  
 50 55 60  
 Lys Lys Asn Ser Tyr Gln Val Tyr Lys Met Lys Asp Tyr Glu Lys Arg  
 65 70 75 80  
 Glu Asn Asn Leu Ile Asn Glu Ile Asn Lys Leu Lys Leu Phe Ile Glu  
 85 90 95  
 Glu Asn Lys Met Thr Val Glu Arg Gly Asn Glu Met Asn Asn Lys Lys  
 100 105 110  
 Leu Glu Glu Met Lys Gln Lys Asn Lys Glu Leu Ile Asn Asn Leu Asn  
 115 120 125

Asp Ile Ser Asp Glu Leu Lys Asn Cys Ile Glu Gln Val Asn Ser Val  
 130 135 140  
 Ser Arg Asn Met Ala Asn Val Glu Lys Glu Lys Glu Asn Ile Ile Asn  
 145 150 155 160  
 Glu Leu Gln Ile Leu Arg Met Lys Asn Asp Thr Met Arg Lys Arg Ile  
 165 170 175  
 Ser Lys Phe Val Glu Gln Glu Lys Val Leu Lys Phe Lys Leu Tyr Thr  
 180 185 190  
 Leu Asn Asn Asp Ile Phe Ser Lys Asn Glu Lys Leu Asn Asp Met Gln  
 195 200 205  
 Lys Lys Leu Asn Asp Val Asn Glu Lys Tyr Lys Asn Ile Val Glu Cys  
 210 215 220  
 Leu Asn Asn Tyr Lys Thr Glu His Lys Glu Gln Ile Glu Lys Lys Ile  
 225 230 235 240  
 Glu Arg Ile Asn Thr Leu Lys Gln Asn Tyr Tyr Tyr Leu Lys Lys Glu  
 245 250 255  
 Tyr Asp Leu Lys Asn Lys Glu Leu Glu Lys Asn Ile Glu His Gly Lys  
 260 265 270  
 Lys Leu Glu His Glu Leu Ser His Cys Tyr Glu Glu Asn Gln Lys Leu  
 275 280 285  
 Asn Glu Glu Ile Lys Arg Arg Asn Ser Phe Ile Lys Asn Lys Asp Arg  
 290 295 300  
 Lys Ile Asp Leu Leu Thr Asn Ile Glu Asn Glu Leu Leu Lys Lys Lys  
 305 310 315 320  
 Glu Ile Asn Asn Ile Lys Leu Met Glu Lys Gln Asn Val Ile Lys Asn  
 325 330 335  
 Asn Glu Gln Leu Leu Lys Asp Ile Lys Asp Glu Asn Glu Lys Met Asn  
 340 345 350  
 Glu His Val Asn Lys Leu Gln Asn Glu Leu Ile Lys Arg Glu Leu Gln  
 355 360 365  
 Asn Lys Cys Ile Ser Lys Asp Ile Glu Phe Cys Lys Lys Glu Lys Glu  
 370 375 380  
 Asp Lys Ile Lys Asn Leu Glu Asp Asp Leu Leu Glu Lys Lys Lys Cys  
 385 390 395 400  
 Ile Glu Asn Leu Lys Asp Glu Leu Ile Asn Ile Lys Lys Lys Met Glu  
 405 410 415  
 Asp Lys Met His Met Thr Asn Glu Met Asp Leu Leu Ser Asn Lys Val  
 420 425 430  
 Glu Glu Leu Asn Arg Ile Asn Lys Thr Tyr Glu Lys Asn Ile Val Glu  
 435 440 445  
 Leu Asn Asn Glu Leu Asp Val Ile Lys Lys Lys Leu Asn Asp Glu Glu  
 450 455 460  
 Phe Leu Lys Glu Glu Glu Lys Lys Lys Asn Ile Asp Met Val Tyr Lys  
 465 470 475 480  
 Ile Lys Glu Tyr Glu Ile Gln Ile Lys Glu Lys Glu Asn Glu Ile Asp  
 485 490 495

Ser Leu Lys Lys Asn Glu Gln Asn Leu His Val Leu Lys Asn Glu Glu  
 500 505 510  
 Leu Asn Glu Lys Glu Ile Ile Leu Lys Asn Lys Tyr Asp Lys Glu Ile  
 515 520 525  
 Asn Met Ile Ile Glu Gln Tyr Asn Lys Lys Ile Gln Glu Glu Lys Asp  
 530 535 540  
 Met Leu Asn Asn Lys Ile Lys Ser Met Asp Gln Thr His Lys Asn Gln  
 545 550 555 560  
 Ile Glu Glu Met Gln Glu Glu Asn Lys Lys Glu Leu Lys Arg Leu Lys  
 565 570 575  
 Asn Val Cys Asp Met Asn Leu Gln Ser Gln Ile Leu Ile Lys Glu Asn  
 580 585 590  
 Glu Lys His Met Gln Glu Lys Val Glu Glu Tyr Lys Asn Leu Leu Lys  
 595 600 605  
 Gln Lys Asp Gln Glu Leu Lys Asn Ile Ile Gln Glu Tyr Asp Glu Arg  
 610 615 620  
 Ile Glu Ile Gln Asn Lys Glu Met Glu Asp Ile Val Asn Asp Cys Glu  
 625 630 635 640  
 Glu Lys Leu Lys Gln Ala Lys Ile Asn Asn Lys Lys Leu Thr Thr Ala  
 645 650 655  
 Thr Asn Met Ala Asn Asn Asn Asn Met Leu Met Asp Glu Asn Leu Lys  
 660 665 670  
 Glu Lys Asp Lys Lys Ile Asn Asp Leu Met Lys Asp Met Glu Lys Lys  
 675 680 685  
 Lys Glu Glu Ile Asn Lys Leu Val Glu Glu Lys Ser Lys Leu Glu His  
 690 695 700  
 Ser His Val Lys Ile Gln Asn Glu Met Ser Leu Leu Val Glu Gln Asn  
 705 710 715 720  
 Glu Lys Leu Lys Glu Glu Met Gly Leu Ser Arg Ile Ala Ile Lys Asp  
 725 730 735  
 Met Glu Glu Ile Lys Lys Asp Met Glu Lys Tyr Glu Glu Glu Lys Lys  
 740 745 750  
 Lys Asn Glu Glu Glu Arg Lys Lys Asn Glu Glu Glu Arg Lys Lys Asn  
 755 760 765  
 Glu Glu Glu Arg Lys Lys Asn Glu Glu Glu Lys Lys Lys Asn Glu Glu  
 770 775 780  
 Glu Arg Lys Lys Asn Glu Glu Glu Lys Lys Lys Leu Glu Lys Asp Lys  
 785 790 795 800  
 His Gln Phe Glu Glu Glu Lys Glu Arg Met Glu Ile Tyr Glu His Gln  
 805 810 815  
 Lys Glu Asp Arg Lys Arg Lys Asp Lys Lys Lys Lys Gly His Ser Ser  
 820 825 830  
 Asp Lys Glu Glu Lys Tyr Asn Lys Lys Glu Lys Thr Lys Glu Lys Ser  
 835 840 845  
 Ser Asn Ile Leu Phe Asp Glu Glu Tyr Ile Ile Gln Leu Glu Glu Leu  
 850 855 860  
 Arg Asp Thr Gly Glu Asn Cys Phe Ile Tyr Leu Lys Ser Leu Ser Lys

865		870		875		880
Glu Leu Asp Val	Ile Ile Asn Lys Leu Lys Ser Lys Asp Asp Ala Leu					
	885			890		895
Leu Asn Asp Ala	Phe Asn Lys Ile Asn Leu Ala Ile Thr Ser Trp Asn					
	900			905		910
Ile Phe Asn Glu	Glu Asn Lys Glu Gly Asp Asn Ile Thr Thr Val Glu					
	915			920		925
Asn Thr Ala Thr	Glu Gly Asn Ile Thr Ile Asp Glu Asn Thr Thr Glu					
	930			935		940
Val Glu Met Asn	Asn Glu Glu Val Tyr Lys Ile Phe Ser Val Glu Lys					
	945			950		955
Tyr Asp Met Leu	Lys Lys Glu Val Gly Glu Lys Val Glu Cys Ile Gln					
	965			970		975
Lys Leu Ile Gly						
	980					

<210> 153  
 <211> 1122  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 153	
Met Ile Asn Lys Ile Leu Asn Gly Trp Arg Ile Ser Phe Leu Leu Asn	
1 5 10 15	
Leu Val Ile Phe Leu Val Gln Gln Leu Gly Leu Tyr Tyr Ile Leu Phe	
20 25 30	
Glu Tyr Asn Lys Leu Ile Leu Leu Cys Leu Phe Asp Ile Tyr Ile	
35 40 45	
Phe Ile His Phe Phe Phe Asn Asn Ser Gln Ser Phe Ser Ala Val Lys	
50 55 60	
Gly Gly Lys Cys Trp Val Leu Tyr Val Tyr Ser Ile Ser Ile Lys Val	
65 70 75 80	
Ile Phe Met Tyr Phe Phe Ala Phe Asn Asp Asn Phe Phe Leu Ala Asp	
85 90 95	
Met Thr Lys Asp Tyr Tyr Asn Lys Cys Val Ile Phe Leu Leu Leu Asn	
100 105 110	
Leu Ser Thr Leu Ile Tyr Thr Ala Leu Ser Val Lys Ser Tyr Lys Gln	
115 120 125	
Leu Tyr Glu Asp Asp Ile Thr Ile Ser Asn Glu Lys Leu Phe His Asn	
130 135 140	
Asp Leu Ile Leu His Val Val Ile Asp Leu Phe Asp Met Phe Glu Leu	
145 150 155 160	
Leu Phe Thr Leu Val Lys Met Ser Tyr Ile Ile Lys Asn Thr Asn Phe	
165 170 175	
Trp Ile Lys Ile Met Gly Gly Val Leu Ile Ser Phe Ser Leu Tyr Leu	
180 185 190	
Asn Ala Tyr Ser Phe Pro Ile Ile Ser Ile Val Pro Glu Lys Asn Asn	
195 200 205	
Lys Asn Leu Asp Leu Gly Asp Ile Tyr Phe Cys Lys Lys His Ala Ala	

210					215					220					
Met	Ile	Gly	Ile	Ile	Leu	Val	Asp	Ile	Pro	Phe	Met	Ile	Leu	Arg	Phe
225					230					235					240
Tyr	Phe	Leu	Ala	Phe	Phe	Phe	Ser	Asn	Ile	His	Phe	Gln	Pro	Leu	Leu
				245					250					255	
Ile	Lys	Asn	Ile	Cys	Phe	Ile	Pro	Ile	Lys	Cys	Lys	Ala	Ile	Lys	Asn
			260					265					270		
Cys	Asn	Phe	Ile	Phe	Glu	Gln	Leu	Lys	Lys	Asn	Ile	His	His	Ser	Asn
		275					280					285			
Lys	His	Thr	Lys	Asn	Lys	Tyr	Ile	Asn	Ser	Gln	Gln	Thr	Cys	Thr	Tyr
	290					295					300				
Asp	Ser	Tyr	Leu	Lys	Asn	Gly	Arg	Gln	Lys	Lys	Lys	Ser	Ser	Leu	Ile
305					310					315					320
Tyr	Asn	Thr	Asn	Asn	Phe	Val	Ser	Leu	Thr	Val	Ala	Phe	Arg	Asn	Ser
				325					330					335	
Val	Asp	Ile	Arg	Ser	Ile	Ala	Ser	Ile	Arg	Asn	Glu	Ile	Asn	Asn	Asn
			340					345					350		
Arg	Ala	Leu	Lys	Asn	Lys	Thr	Gly	Glu	Lys	Gln	Met	Gly	Lys	Met	Gly
		355					360					365			
Lys	Met	Gly	Lys	Met	Gly	Lys	Met	Gly	Lys	Met	Gly	Lys	Met	Gly	Lys
	370					375					380				
Met	Gly	Lys	Met	Gly	Lys	Met	Gly	Lys	Met	Gly	Lys	Met	Gly	Lys	Met
385					390					395					400
Gly	Lys	Met	Asp	Lys	Met	Gly	Lys	Met	Asp	Lys	Met	Gly	Lys	Met	Asp
				405					410					415	
Lys	Met	Gly	Lys	Met	Asp	Lys	Met	Gly	Asp	Ser	Gln	Met	Gly	Lys	Met
			420					425					430		
Glu	Gly	Asn	Gln	Met	Gly	Lys	Met	Gly	Asp	Asn	His	Thr	Cys	Asp	Asn
			435				440					445			
His	Thr	Ser	Asp	Ser	His	Thr	Cys	Asp	Ser	His	Thr	Cys	Asp	Ser	His
	450					455					460				
Thr	Cys	Asp	Asn	His	Thr	Ser	Asp	Asn	Asn	Thr	Cys	Asn	Asn	His	Thr
465					470					475					480
Ser	Asp	Asn	Asn	Thr	Cys	Asn	Asn	His	Thr	Cys	Asp	Asn	His	Thr	Cys
				485					490					495	
Asp	Asn	His	Thr	Ser	Asp	Asn	Asn	Thr	Cys	Asn	Asn	His	Thr	Cys	Asn
			500					505					510		
Asn	His	Thr	Cys	Asn	Asn	His	Thr	Cys	Asn	Asn	His	Thr	Cys	Asn	Asn
		515					520					525			
His	Thr	Cys	Asn	Asn	His	Thr	Cys	Asn	Asn	His	Thr	Ser	Asp	Asn	Asn
	530					535					540				
Thr	Cys	Asn	Asn	His	Thr	Cys	Asp	Asn	Asn	Thr	Cys	Asn	Asn	His	Thr
545					550					555					560
Leu	Gly	Asn	Pro	His	Phe	Tyr	Asn	Pro	His	Phe	Tyr	Asn	Asn	Thr	Leu
				565					570					575	
Asp	Met	Pro	Asn	Asn	Lys	Lys	Glu	Thr	His	Asn	Asn	Phe	Ser	His	Asn
				580				585					590		

Asp Thr Gln Glu Asn Asn Ile Met Lys Asn Lys Asp Gly Leu Tyr Leu  
 595 600 605  
 Asn Thr Lys Ser Tyr Asp Asn Asn Leu Phe Gly Ala Ser Asn Lys Leu  
 610 615 620  
 Thr Ser His His Glu Asn Ile Lys Lys Ile Ile Glu Leu Asn Thr Thr  
 625 630 635 640  
 Lys Leu Val Glu Glu Arg Asn Asn Ser Leu Leu Asp Ile Asn Glu Tyr  
 645 650 655  
 Asn Asn Asn Ser Asn Asp Leu Asn Glu Tyr Phe Asp Asn Leu Ile Glu  
 660 665 670  
 Asn Asn Ile Leu Ser Tyr Arg Lys Met Asn Ile Lys Lys Asn Lys Ile  
 675 680 685  
 Gly Thr Lys Phe Ile Met Asn Lys Leu Met Tyr Thr Asn Val Ser Asn  
 690 695 700  
 Asn Glu Arg Tyr Arg Tyr Tyr Leu Asp Asp Asn Leu Lys Val Ser Tyr  
 705 710 715 720  
 Ile Asn Gln Leu Arg Leu Met Ile Pro Tyr Ile Thr Tyr Cys Leu Gly  
 725 730 735  
 Lys Ile Ala Met Ser Ile Val Phe Tyr Ile Phe Tyr Ile Lys Phe Asp  
 740 745 750  
 Ile Ser Tyr Leu Lys Leu Ile Leu Thr Asp Tyr Lys Met Tyr Phe Lys  
 755 760 765  
 Leu Phe Glu His Lys Asn Ile Ile Phe Ile Val Ser Phe Ser Ile Ile  
 770 775 780  
 Leu Gly Asn Thr Ile Ile Ser Phe Phe Ser Phe Ile Phe Leu Ser Ser  
 785 790 795 800  
 Phe Phe Glu Val Val Leu Ser Thr Leu Phe Ile Phe Ile Lys Cys Ile  
 805 810 815  
 Ser Glu Phe Leu Phe Leu Leu Leu Leu Val Tyr Asn Glu Val Phe Glu  
 820 825 830  
 Ile Phe Leu Arg Asn Ile Lys Gln Pro Asp Lys Tyr Ala Pro Tyr Phe  
 835 840 845  
 Phe Leu Thr Phe Ala Val Ile Pro Ser Phe Lys Ile Ile Arg Asn Ile  
 850 855 860  
 Tyr Phe Phe Leu Cys Ala Leu Ser Gly Arg Gln Phe Ile Ala Tyr Ile  
 865 870 875 880  
 Ile Arg Pro Phe Ile Lys Asp Lys Asn Ile Ser Lys Leu Pro Asn Phe  
 885 890 895  
 Phe Asn Ile Lys Glu Tyr Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 900 905 910  
 Asn Ala His Asn Asn Asn Ala His Asn Asn Asn Asn Ala His Asn Asn  
 915 920 925  
 Asn Ile Ser His Asn Met Asn Tyr Ile Asn Glu Asp Tyr Tyr Leu Phe  
 930 935 940  
 Asn Asn Asn Asp Met Tyr Thr Lys Asn Thr Val Lys Gly Asp Tyr Lys  
 945 950 955 960

Gly Phe Ile Ser Ile Ala Ser Leu Leu Ile Tyr Ile Asn Thr Lys Tyr  
 965 970 975  
 Met His Gly Leu Ala Ser Leu Ser Thr Leu Met Leu Gly Asn Asn Phe  
 980 985 990  
 Ile Lys Asn Leu Arg Leu Asn Tyr Asn Leu Arg Asn Asn His Ile Leu  
 995 1000 1005  
 Leu Ile Phe Ile Asn Phe Phe Thr Arg Leu Ser Leu Leu Leu Phe Ile  
 1010 1015 1020  
 Tyr Val His Tyr Lys Thr Ser Asp Lys Leu Tyr Glu Tyr Val Glu Tyr  
 1025 1030 1035 1040  
 Phe Tyr Tyr Leu Val Thr Phe Ile Phe Ile Val Asp Phe Ile Phe Lys  
 1045 1050 1055  
 Trp Ile Tyr Met Phe Ile Ser His Asn Leu Arg Leu Cys Ala Ala Tyr  
 1060 1065 1070  
 His Leu Glu Leu Lys Ser Met Tyr Glu Asp Ile Tyr Tyr His Ser Gln  
 1075 1080 1085  
 Ile Lys Lys Glu Ser Ser Lys Ile Tyr Leu Lys Gln Leu Tyr Thr Lys  
 1090 1095 1100  
 Tyr Gln Thr Asn Asn Phe Tyr Tyr Tyr Asn Ile Pro Leu Phe Ser Glu  
 1105 1110 1115 1120  
 Phe Ile

<210> 154  
 <211> 549  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 154

Met Glu Glu Lys Lys Lys Ile Asn Asn Lys Ser Asn Ser Arg Val Ser  
 1 5 10 15  
 Asn Asp Asp Thr Asn Lys Glu Lys Arg Lys Lys Leu Lys Pro Ile Gln  
 20 25 30  
 Val Arg Arg Ser Ile Lys Asp Ile Ile Ile Ser His Asn Pro Tyr Asp  
 35 40 45  
 Tyr Ile Tyr Asn Tyr Lys Gly Asn Asp Ile Asp Ile Phe Asp Ile Asn  
 50 55 60  
 Lys His Asp Lys Ile Val Lys Asp Arg Thr Ser Glu Ile Glu Glu Asn  
 65 70 75 80  
 Ser Asn Ile Phe Ile Glu Asn Glu Ile Leu Asp Asn Asn Glu Met Leu  
 85 90 95  
 Leu Arg Lys Glu Leu Asn Glu Leu Ile Asn Lys Asp Asp Leu Ser Glu  
 100 105 110  
 Asp Met Lys Asn Asp Ile Lys Ala Leu Tyr Ile Glu Val Gln Glu Met  
 115 120 125  
 Tyr Leu Ile Leu Lys Asn Asp Ile Lys Asn Asn Ile Pro Ser Ser Asp  
 130 135 140  
 Glu Ile Ile Lys Leu Tyr Leu Ala Asp Asp Gln Lys Asp Lys Ser Thr  
 145 150 155 160



Asn Ile Ile Trp Lys Arg Phe Cys Phe Tyr Lys Leu Leu Ser Asp Lys  
 165 170 175

Leu Asn Asp Leu His Ile Ser Thr Ile Ser Ser Tyr Arg His Thr Tyr  
 180 185 190

Leu Lys Thr Ile Tyr Ile Trp Tyr Lys Lys Asn Lys Lys Leu Leu Phe  
 195 200 205

Asn Thr Asp Asp Asn Lys Glu Val Phe Gly Gly Asn Asn Ile Val Gly  
 210 215 220

Glu Ile Asn Glu Val Asp Glu Lys Asn Glu Ser Asp Glu Lys Asn Glu  
 225 230 235 240

Val Asp Glu Lys Asn Glu Gly Gly Glu Lys Asn Val Asp Glu Lys Asn  
 245 250 255

Glu Gly Gly Glu Lys Asn Val Asp Glu Lys Asn Glu Gly Asp Glu Lys  
 260 265 270

Asn Ile Thr Asn Gln Asn Glu Ile Ile Lys Asn Lys Asp Pro Leu Asn  
 275 280 285

Cys His Thr Lys Lys Glu Glu Thr Glu Lys Glu Met Lys Lys Asp Tyr  
 290 295 300

Ala Lys Lys Ile Ser His Asn Phe Asp Glu Thr Leu Gln Glu Glu Met  
 305 310 315 320

Asn Lys Ile Lys Lys Glu His Glu Ile Lys Glu Asn Asp Ile Asn Leu  
 325 330 335

Leu Val Tyr Asn Glu Glu Pro His Asp Val Leu Asn Lys Tyr Thr Phe  
 340 345 350

Pro Asn Asp Val Phe Leu Leu Asn Asn Thr Lys Ile Ser Asp Lys Asn  
 355 360 365

Ile Lys Asn Val Lys Glu Glu Gln Asn Val Val Ser Asn Asp Leu Asn  
 370 375 380

Val Leu Leu Leu Arg Asn Asp Lys Asp Glu Glu Asp Lys Tyr Ala Lys  
 385 390 395 400

Gly Ile Cys Glu His Val Ser Leu Asp Ile Phe Ile Asn Asn Asn Asp  
 405 410 415

Ala Phe Asn Ile Asn Thr Asn Asp Ala Phe Asn Ile Asn Thr Asn Asp  
 420 425 430

Thr Phe Asn Ile Asn Thr Asn Asp Ala Phe Asn Ile Asn Thr Asn Asp  
 435 440 445

Ala Phe Asn Ile Asn Thr Asn Asp Ala Phe Asn Ile Asn Thr Asn Asp  
 450 455 460

Thr Phe Asn Ile Asn Thr Asn Asp Thr Phe Asn Ile Lys Thr Asn Asp  
 465 470 475 480

Thr Leu Ser Ile Asn Asn Tyr Asn Leu Asp Ile Lys Glu Glu His Lys  
 485 490 495

Asn Val Pro Ile Pro Leu His Thr Asn Lys Ile Lys Glu Leu Glu Glu  
 500 505 510

Glu Ile Lys Lys Gln Lys Leu Leu Ile Lys Lys Lys Glu Ile Glu Ile  
 515 520 525

Ile Asn Ser Pro Ile Gly Ile Lys Phe Lys Asp Ile Phe Gly Lys Phe

530

535

540

Gln Asp Ile Asn Asn  
545

<210> 155  
<211> 192  
<212> PRT  
<213> Plasmodium falciparum

<400> 155  
Met Leu Leu Gly Arg Arg Tyr Ile Thr His Lys Tyr Lys Ile His Ile  
1 5 10 15  
Lys Lys Lys Lys Lys Glu Asn Asp Lys Lys Asn Asn Ile Thr Asn Val  
20 25 30  
Asn Tyr Lys Thr Asn Asn Val Ser Glu Ser Ile Ser Val Ile Ser Ser  
35 40 45  
Leu Ile Ile Lys Leu Ile Lys Tyr Met Asn Ser Pro Ile Ser Leu Asn  
50 55 60  
Lys Ile Ile Ile Gly Asn Asn Phe Ile Lys Asn Thr Arg Leu Asp Asn  
65 70 75 80  
Phe Leu Phe Phe Ser His Ile Lys Glu Ile Thr Phe Lys Leu Ile Leu  
85 90 95  
Tyr Phe Ile Ser Leu Leu Ile Ser Leu Arg Tyr Lys Tyr Ile Asn Ser  
100 105 110  
Leu Phe Ile Leu Thr Leu Phe Phe Ile Asn Ile Ile Leu Ser Thr Leu  
115 120 125  
Tyr Leu Ile Phe Ser Lys Ile Asn Arg Asn Val Ala Met Glu Tyr Ile  
130 135 140  
Leu Ala Gln Ala Ile Tyr Ala His Arg Asn Glu Asp His His Lys Gly  
145 150 155 160  
Ile Asp Leu Leu Asp Phe Glu Lys Lys Lys Lys Lys Ala Tyr Gln Lys  
165 170 175  
Tyr Ser Tyr Asp Tyr Met Ile Leu Phe Gly Asn Thr Leu Asn Tyr Tyr  
180 185 190

<210> 156  
<211> 307  
<212> PRT  
<213> Plasmodium falciparum

<400> 156  
Met Ile Lys Asn Val Cys Phe Ile Ile Ile His Gly Ala Arg Ile Tyr  
1 5 10 15  
Arg Lys Cys Lys Tyr His Asn His Lys Lys Lys Asn Lys Lys Lys  
20 25 30  
Asn Pro Lys Glu Lys Arg Asp Arg His Lys Ile Ile Thr Asn Ile Asn  
35 40 45  
Asp Asn Val Asn Ile Asn Gly Phe Gln Asp Val Pro Leu Tyr Ser Asn  
50 55 60

Lys Asp Met Glu Ile Gln Ser Asn Lys Gln Lys Tyr Trp Ser Arg Asn  
 65 70 75 80  
 Met Asp Lys Met Asp Ile His Ser Thr Asn Thr Lys Ile Phe Phe Asp  
 85 90 95  
 Lys Asn Ile Asn Phe Asp Lys Asn Phe Phe Cys Asn Tyr Thr Ser Arg  
 100 105 110  
 Phe Ser Asp Ile Ile Ile Asn Ile Asp Asp Ile Asp Tyr Ile Asn Tyr  
 115 120 125  
 Lys Arg Ile Lys His Leu Asn Tyr Glu Lys Ile Lys Arg Ser Leu Tyr  
 130 135 140  
 Phe Phe Tyr Leu Lys Tyr Asn Gly Ile Ser Ile Lys Lys Tyr Ile Ser  
 145 150 155 160  
 Cys Tyr Ile Asp Asn Ile Glu Lys Tyr Ser Ile Arg Tyr Phe Phe Ile  
 165 170 175  
 Ile Phe Phe Phe Phe Ile Phe Ile Ala Ile Lys Ile Thr Ile Leu Val  
 180 185 190  
 Ile Thr Tyr Thr Phe His Phe Asp Glu Leu Phe Asn Lys Cys Leu Tyr  
 195 200 205  
 Glu Phe Thr Tyr Asn His Asn Tyr Asn Ile Ile Lys Ser Cys Val Ile  
 210 215 220  
 Leu Lys Ile Asn Phe Ile Ile Ile Leu Ser Tyr Thr Leu Ser Ser Phe  
 225 230 235 240  
 Phe Leu Tyr Ile Phe Ser Ser Ser Phe Phe Asp Ala Leu Phe Met Pro  
 245 250 255  
 Leu Phe His Phe Phe Asn Ile Phe Ser Tyr Thr Phe Val Leu Ile Thr  
 260 265 270  
 Met Ser Gln Tyr Asn Pro Ser Tyr Asp Tyr Leu Asn Tyr Phe Asn Arg  
 275 280 285  
 Ser Lys Asn Ile Val Ile Val Leu Leu Val Phe Ile Tyr Leu Val Lys  
 290 295 300  
 Ile Lys Lys  
 305

&lt;210&gt; 157

&lt;211&gt; 332

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 157

Met Ile Val Thr Ile Cys Ile Leu Ile Thr Ile Leu Val Tyr Ile Leu  
 1 5 10 15  
 Leu Phe Tyr Ile Asn Asp Phe Tyr Ile Leu Asn Ile His Lys Ile Ser  
 20 25 30  
 Ile Glu His Ile Leu Phe Phe Leu Ile Ile Thr His Val Ser Ile Asp  
 35 40 45  
 Phe Ile Asp Ile Ser Gln Phe Phe Tyr Ser Ser Tyr Ser Tyr Phe Phe  
 50 55 60  
 Leu Tyr Tyr Phe Arg Leu Lys Asp Glu Ile Asn Ile Phe Lys Asp Thr  
 65 70 75 80

His Ile Phe Ser Asp Lys Ile Leu Asp Lys Asn Lys Ile Val His Phe  
 85 90 95  
 Tyr Asn Leu Thr Ile Asn Ile Tyr Glu Val Ile Phe Ile Thr Phe Gly  
 100 105 110  
 Ile Leu Ile Ala Leu Asn Ile Ser Leu His Ala Tyr Ser Phe Pro Asn  
 115 120 125  
 Tyr Ser Tyr Glu Glu Ile Pro Ser Ile Leu Lys Ile Lys Asn Lys Asn  
 130 135 140  
 Asn Ile Asn Ser Asn Asn Ile Asn Ser Asn Asn Ile Asn Ser Asn Asn  
 145 150 155 160  
 Ile Asn Ser Asn Asn Ile Asn Ser Asn Asn Ile His Cys Asn Asn Asn  
 165 170 175  
 Ile His Cys Asn Asn Ile His Cys Asn Asn Asn Ile Cys Ser Lys Phe  
 180 185 190  
 Ile Lys His Lys Pro Ser Leu His Asn Asn Asn Pro Asn Asn Lys Glu  
 195 200 205  
 Glu Asp Ile Tyr Lys Ile Tyr Ser Asn Lys Tyr Asn Thr His Asn Asp  
 210 215 220  
 Gln Asp Thr Tyr Asn Thr Tyr Asn His Ile Lys Thr Ser Asn Met Ile  
 225 230 235 240  
 Asn Ile Lys Gln Tyr Lys Asn Asp Ser Ser Ala Tyr Asn Asn Ser Tyr  
 245 250 255  
 Lys Tyr Ile Asn Ser Pro Tyr Tyr Tyr Asn Asn Asn Ser Ser Asn Asn  
 260 265 270  
 Asn Thr Ser Asn Asn Ile Thr Ile Asn Lys Gln Lys Glu Phe Ser Lys  
 275 280 285  
 Val Ala Gly Asp Ala Met Ser Cys Leu Lys Tyr Ile Ser Ile Tyr Ser  
 290 295 300  
 Phe Leu Leu Thr Asp Ile Ser Phe Phe Leu Ser Arg Leu Leu Leu Phe  
 305 310 315 320  
 Phe Met Leu Gln Thr Val Ser Cys Asn Val Lys Lys  
 325 330

&lt;210&gt; 158

&lt;211&gt; 551

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 158

Met Lys Ala Ser Gly Leu Cys Gln Gln Leu Asn Lys Cys Met Trp Asn  
 1 5 10 15  
 Gln Leu Val Val Ser Arg Lys Cys Ile Lys Lys Phe Val Cys Asn Tyr  
 20 25 30  
 Ser Thr Lys Ile Ser Pro Ile Glu Ile Ser Lys Ile Leu Glu Lys Lys  
 35 40 45  
 Phe Glu Ser Phe Asn Phe Lys Thr Ser Ser Asn Glu Val Gly Tyr Val  
 50 55 60  
 Leu Ser Val Gly Asp Gly Ile Cys Arg Ala Tyr Gly Leu Asn Asn Val  
 65 70 75 80

Lys Ser Ser Glu Leu Val Glu Ile His Asn Glu Asp Asp Lys Gly Ser  
 85 90 95  
 Val Thr Tyr Gly Met Ala Thr Asn Leu Glu Tyr Asp Asn Val Gly Ile  
 100 105 110  
 Val Ile Phe Gly Asn Asp Arg Asn Ile Lys Glu Gly Asp Val Ile Lys  
 115 120 125  
 Arg Thr Asn Arg Ile Ile Asp Val Asn Val Gly Tyr Glu Leu Leu Gly  
 130 135 140  
 Arg Val Val Asp Ala Leu Gly Asn Cys Ile Asp Gly Glu Lys Asn Val  
 145 150 155 160  
 Val Thr Lys Glu Arg Arg Lys Ile Glu Ile Lys Ala Pro Gly Ile Ile  
 165 170 175  
 Ala Arg Lys Ser Val Asn Glu Ser Ile Ile Thr Gly Ile Lys Cys Ile  
 180 185 190  
 Asp Ser Leu Val Pro Ile Gly Arg Gly Gln Arg Glu Leu Ile Ile Gly  
 195 200 205  
 Asp Arg Gln Thr Gly Lys Thr Ala Ile Ala Ile Asp Ala Ile Ile His  
 210 215 220  
 Gln Lys Asn Ile Asn Asp Asn Val Leu Asn Asn Asn Glu Lys Val Tyr  
 225 230 235 240  
 Cys Ile Tyr Val Ala Ile Gly Gln Lys Lys Ser Asn Ile Ala Lys Leu  
 245 250 255  
 Val Asn Leu Leu Lys Lys Tyr Asp Ala Leu Lys Tyr Thr Ile Ile Val  
 260 265 270  
 Asn Ser Ser Ala Ser Asp Ala Ser Pro Leu Gln Phe Leu Ala Pro Tyr  
 275 280 285  
 Thr Gly Cys Ala Met Ala Glu Phe Phe Arg Asp Asn Gly Lys His Ala  
 290 295 300  
 Leu Ile Ile Phe Asp Asp Leu Ser Lys Gln Ala Val Ala Tyr Arg Gln  
 305 310 315 320  
 Leu Ser Leu Leu Leu Arg Arg Pro Pro Gly Arg Glu Ala Tyr Pro Gly  
 325 330 335  
 Asp Ile Phe Tyr Ile His Ser Lys Leu Leu Glu Arg Ser Ser Lys Leu  
 340 345 350  
 Asn Asp Asn Leu Lys Gly Gly Ser Leu Thr Ala Leu Pro Ile Ile Glu  
 355 360 365  
 Thr Leu Asn Asn Asp Val Ser Ala Tyr Ile Pro Thr Asn Val Ile Ser  
 370 375 380  
 Ile Thr Asp Gly Gln Ile Phe Leu Glu Ser Glu Leu Phe Tyr Lys Gly  
 385 390 395 400  
 Ile Ile Pro Ala Ile Asn Val Gly Leu Ser Val Ser Arg Ile Gly Ser  
 405 410 415  
 Ser Ala Gln Tyr Asn Cys Met Lys Lys Leu Ala Ser Ser Met Lys Leu  
 420 425 430  
 Glu Leu Ala Gln Phe Arg Glu Ile Val Ala Phe Ser Gln Phe Gly Ser  
 435 440 445  
 Asp Leu Asp Val Ser Thr Lys Lys Leu Ile Glu Lys Gly Lys Ile Leu  
 345

450                      455                      460  
 Thr Glu Ile Leu Lys Gln Lys Gln Tyr Ser Pro Val Asn Ile Ser Tyr  
 465                      470                      475                      480  
 Gln Ile Cys Leu Ile Tyr Ala Ala Thr Lys Asp Tyr Leu Leu Asn Leu  
 485                      490  
 Pro Ile Glu Lys Val Gln Asp Phe Glu Thr Lys Tyr Phe Asp Tyr Leu  
 500                      505                      510  
 Asp Asn Asn Tyr Leu Asp Val Leu Lys Lys Ile Gln Ser Asn Cys His  
 515                      520                      525  
 Leu Ser Glu Val Glu Asp Gln Ile Lys Glu Ser Ile Gln Lys Phe Leu  
 530                      535                      540  
 Glu Leu Tyr Lys Asn Glu Ala  
 545                      550

<210> 159  
 <211> 1817  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 159  
 Met Ser Ser Leu Leu Arg Ser Phe Lys Asn Leu Pro Arg Val Lys Leu  
 1                      5                      10                      15  
 Lys Ile Lys Arg Asn Glu Glu Tyr Glu Arg Asn Leu Asn Asn Leu Ala  
 20                      25                      30  
 Asn Leu Ser Asn His Lys Lys Leu Ile Arg Ile Asp Ile Asn Gly Lys  
 35                      40                      45  
 Val Lys Lys Cys Ser Arg Tyr Phe Phe Asn Lys Asn Lys Tyr Ile Tyr  
 50                      55                      60  
 Ile Asn Asn Ile Glu Asp Met Lys Arg Phe Asp Glu Thr Lys Asn Ile  
 65                      70                      75                      80  
 Asn Ile Asn Lys Asn Ile Asn Lys Lys Asn Asn Ile Asn Glu Lys Asn  
 85                      90                      95  
 Asn Ile Asn Val Lys Tyr Asp Ile Tyr Asn Ile His Asn Asn Thr Phe  
 100                      105                      110  
 Asp Ile His Arg Asn Tyr Gln Cys Lys Lys Gly Asn Ile Lys Asn Asp  
 115                      120                      125  
 Asn Ile Leu His Ile Asp Lys Lys Glu Lys Lys Lys Glu Glu His Gln  
 130                      135                      140  
 Ser Phe Lys Lys Lys Arg Lys Glu Glu Gln Lys Tyr Asn Asn Phe Ile  
 145                      150                      155                      160  
 Ser Thr Tyr Asn Leu Thr Gln Asp Glu Ile Ile Tyr Met Arg Phe Ile  
 165                      170                      175  
 His Lys Ile Lys Ile Lys Asn Met Phe Ala Leu Ile Asn Asn Ile Arg  
 180                      185                      190  
 Lys Asn Ile Tyr Ile Asn Lys Tyr Gln Ala Asn Val Ile Leu Asn Cys  
 195                      200                      205  
 Ile Tyr Lys Tyr Leu Arg Ile His Cys Tyr Thr Leu Ser Lys Glu Glu  
 210                      215                      220  
 Phe Phe Phe Phe Val Tyr Ile Phe Pro Gln His Val Lys Tyr Ser Ser

225						230						235						240
Lys	Val	Leu	Ser	Tyr	Leu	Ile	Asn	Leu	Leu	Gln	Asp	Arg	His	Arg	Ile			
				245					250					255				
Arg	Asp	Ser	Thr	Gln	Met	Asn	Val	Cys	Tyr	Asn	Glu	Met	Lys	Lys	Asp			
			260					265					270					
Asn	Asp	Asp	Asp	Lys	Asn	Lys	His	Lys	Asp	Asn	Asn	Asn	Asn	Asn	Asn			
		275					280					285						
Asn	Asn	Lys	Asn	Lys	His	Lys	Asp	Asn	Asn	Lys	Asn	Lys	His	Lys	Asp			
	290					295				300								
Asn	Asn	Asn	Asn	Asn	Asn	Lys	Asn	Lys	His	Ser	Asp	His	Leu	Ile	Ser			
305					310					315					320			
Asn	Leu	Tyr	Asp	Asn	His	Gln	Asn	Lys	His	Ser	Asp	His	Leu	Ile	Ser			
				325					330					335				
Asn	Leu	His	Asp	Glu	Glu	Asp	Asn	Tyr	Phe	Cys	Thr	Asn	Leu	Thr	Met			
			340					345					350					
Ser	Gln	Cys	Ile	Asn	Leu	Ile	Cys	Glu	Ile	Asn	Leu	Tyr	Tyr	Leu	Asn			
		355					360					365						
Ile	Ser	Ile	Lys	Lys	Leu	Tyr	Phe	Asp	Tyr	Leu	Asn	Lys	Tyr	Met	Lys			
	370					375					380							
His	Ile	Lys	Leu	Glu	His	Ile	Phe	Glu	Leu	Phe	Thr	Glu	Gly	Cys	Tyr			
385					390					395					400			
Leu	Phe	Leu	Leu	Pro	Asn	Glu	Lys	Ile	Lys	Ser	Asn	Asn	Ile	Tyr	Thr			
				405					410					415				
Pro	Asn	Ile	Phe	Leu	Lys	Lys	Leu	Lys	Asn	Tyr	Ile	Thr	Ser	Asn	Asp			
			420					425					430					
Phe	Val	Ile	His	Ile	Asn	Asp	Arg	Thr	Leu	Asn	Arg	Tyr	Ile	Lys	Phe			
		435					440					445						
Leu	Ser	Tyr	His	Cys	Ser	Asn	Asn	Ile	Tyr	Val	His	Ile	Leu	Phe	Asn			
	450					455					460							
Asp	Leu	Tyr	Ile	Thr	Leu	His	Lys	Lys	Ile	Phe	Ile	Asn	Asn	Tyr	Asp			
465					470					475					480			
Met	Leu	Ile	Lys	His	Tyr	Lys	Ser	Thr	Ala	Asp	His	Ile	Leu	Tyr	Leu			
				485					490					495				
Thr	Asn	Lys	Asn	Glu	Asn	Leu	Asn	Tyr	Leu	Asn	Thr	Ile	Leu	Leu	Asn			
			500					505					510					
Asn	Tyr	Tyr	Ser	Leu	Tyr	Asn	Lys	Lys	Glu	Asn	Asn	Glu	Lys	Arg	Gln			
		515					520					525						
Ser	Leu	Glu	Asn	Leu	Lys	Val	Lys	Ile	Phe	Pro	Ser	His	Leu	Asn	Tyr			
	530					535					540							
Lys	Gln	His	Thr	Thr	Asn	Lys	Asn	Val	Asn	Asp	Pro	Asn	Gln	Gln	His			
545					550					555					560			
Lys	His	Asp	Lys	Asp	Asp	Ser	Tyr	Asp	Asn	Thr	Tyr	Glu	Gln	Met	Lys			
				565					570					575				
Asn	Asn	Lys	Asn	Lys	Ile	Tyr	Pro	Asn	Glu	Tyr	Ile	Thr	Thr	His	Ile			
			580					585					590					
Leu	Gln	Asn	Asn	Tyr	Glu	Gln	Asn	Leu	Tyr	Ser	Phe	Gln	Lys	Lys	Asp			
		595					600					605						

Asp Thr Asn Ile Asn Asn Ile Phe Asp Leu His Lys Arg Glu Gln Ile  
 610 615 620  
 Tyr Glu Tyr Glu Lys Glu Asn Glu Ser Ser Asp Ile Phe Arg Asp Ser  
 625 630 635 640  
 Tyr Lys Arg Lys Ile Lys Glu Glu Lys Lys Lys Lys Asn Ile Tyr Lys  
 645 650 655  
 Tyr Glu Asp His Pro Leu Asn Lys Glu Lys Lys Lys Lys Lys Lys Phe  
 660 665 670  
 Phe Tyr Ile Asn Tyr Glu Lys Gly Asp Asp Lys Asn Asp Asn Asp Leu  
 675 680 685  
 Tyr Tyr Asn Asn Ile Tyr Ser Lys Asn Leu Glu Asn Ile Gln Asn Lys  
 690 695 700  
 Asn Tyr Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 705 710 715 720  
 Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 725 730 735  
 Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 740 745 750  
 Phe Asp Lys Tyr Asn Ile Pro Cys Thr Asn Thr Asn Leu Ser Leu Leu  
 755 760 765  
 Tyr Asp Lys Glu Lys Leu Phe Leu Phe Thr Tyr Ala Tyr Asp Lys Ile  
 770 775 780  
 Gln Thr Tyr Thr Tyr Glu Glu Leu Lys Ser Lys Tyr Lys Ile Ser Thr  
 785 790 795 800  
 Lys Ile Val Asp Arg Asn Ile Lys Met Phe Leu Lys Phe Leu Lys Asn  
 805 810 815  
 Tyr Asn Asn Asn Glu Asn Thr Tyr Val Asp Asn Ile Ile Ser Lys Lys  
 820 825 830  
 Asn Ile Phe His Leu Leu Ala Ser Met Lys Asn Lys Val Thr Asn Lys  
 835 840 845  
 Thr Asn Thr His Lys Asp Ile Tyr Gln Phe Ile His Ser Trp Tyr His  
 850 855 860  
 Ile Lys Leu Ala Asp Gln Asn Lys Glu His Ser Phe Gln Asp Asp Lys  
 865 870 875 880  
 Tyr Leu Ile Asn Asn Leu Tyr Glu Lys His Lys Val Gln His Asn Thr  
 885 890 895  
 Met Thr His His Ile Ile Lys Met Glu Asp Lys Lys Gly Asp Ile His  
 900 905 910  
 Leu Met Glu Asn Asn Asn Met Leu Leu Asn Asn Asn Met Ser Leu Asn  
 915 920 925  
 Asn Asn Met Ser Leu Asn Asn Ser Ile Pro Leu Asn Asn Ser Ile Pro  
 930 935 940  
 Leu Asn Asn Ser Ile Pro Leu Asn Asn Ser Ile Pro Leu Asn Asn Ser  
 945 950 955 960  
 Ile Pro Leu Asn Asn Ser Ile Pro Leu Asn Asn Ser Ile Ser Leu Asn  
 965 970 975



Ser Cys Ile Ser Leu Tyr Asn Ser Ile Ser Leu Tyr Ser Asn Lys Asn  
 980 985 990  
 Thr Ser Phe Asn His Leu Tyr Asn Asn Ile Tyr Asp Thr Cys Phe Ile  
 995 1000 1005  
 Gln Asn Asn Tyr Ile Ser Asn Gln Gln Val Gln Asn Tyr Lys Asn Glu  
 1010 1015 1020  
 Lys Asn Thr Asn Met Glu His Tyr Asn Glu Lys Lys Leu Phe Ile Tyr  
 1025 1030 1035 1040  
 Pro Ile Tyr Tyr Leu Glu Asp Lys Asn Tyr Phe Leu Asn Val Val Asn  
 1045 1050 1055  
 Asn Ile Phe Phe Asn Lys Asn Tyr Asn Asn Thr Phe Phe Tyr Thr Cys  
 1060 1065 1070  
 Gln Ile Asn Ile Leu Ser Lys Gly Leu Tyr Tyr Phe Ile Asn Tyr Tyr  
 1075 1080 1085  
 Thr Leu Leu Ile Ser Ser Asn Tyr Lys Ala Glu Glu Ile Lys Thr Asp  
 1090 1095 1100  
 Asp Asn Lys Cys Asn Ile Asn Asn Asn Asn Asn Asn Asn Asn Asn  
 1105 1110 1115 1120  
 Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Tyr  
 1125 1130 1135  
 Asn Asn Asn Asn Tyr Asn Asn Asn Asn Val Tyr Pro Leu Ile Asn His  
 1140 1145 1150  
 Phe Thr Thr Thr Phe Tyr Glu Met Val Thr Tyr Leu Leu Lys Asn Ile  
 1155 1160 1165  
 Tyr Arg Ile His Ile Ser Lys Phe Phe Tyr Ile Phe Val Ala Leu Ser  
 1170 1175 1180  
 Lys Phe Phe Leu Met Asn Ser Tyr Gln Gln Ser Asn Thr Asn Lys Arg  
 1185 1190 1195 1200  
 Glu Asn Ser Ile His Met Glu Asn Val Leu Tyr Ile Leu Tyr Ile Ile  
 1205 1210 1215  
 Arg Lys Lys Gln Tyr Glu His Val Lys Ser Ile Leu Tyr Asp Lys Ser  
 1220 1225 1230  
 Asn Glu Asn Tyr Phe Arg Phe Asn Glu Asn Lys Asp Ile Lys Met Glu  
 1235 1240 1245  
 Asn Thr Asn Met Leu Tyr Asn Ile Ile Leu Asn Asn Phe Ser Thr Glu  
 1250 1255 1260  
 Asp His Asp Glu Phe Met Thr Leu Gln Lys Asn Asn Glu Asp Asn Asn  
 1265 1270 1275 1280  
 Lys Met Ile Ile Asp Asn Ile Asn Asn Val Asp Asn Ile Asn Asp Leu  
 1285 1290 1295  
 Ile Lys Ser His His Cys Asp Asn Asn Lys Lys Glu Asp Thr Ser Ser  
 1300 1305 1310  
 Leu His Asn Lys Leu Tyr Asn Gly Leu His Phe Leu Ile Met Phe Leu  
 1315 1320 1325  
 Asn Asn Tyr Leu Asp Asn Thr Lys His Phe Lys Ile Asn His Phe Leu  
 1330 1335 1340  
 Ser Ser Leu Phe Tyr Ile Asn Lys Ile Ile Pro Pro Asn Met Lys His  
 349

1345	1350	1355	1360
Met Tyr His Leu Glu Thr Tyr Leu His Lys Asn His Lys Ile Tyr Lys	1365	1370	1375
Asn Lys Phe Phe Tyr Ile Tyr Asn Gly Leu Asp Leu Leu Lys Lys Ser	1380	1385	1390
Tyr Leu Val His Ile Lys Lys Leu Tyr Ile Asn Ser Tyr Ile Lys Ser	1395	1400	1405
Tyr Asn Asn Lys Lys Lys Asn Asn Asn Val Asn Gly Asp Val Tyr Asn	1410	1415	1420
Asn Phe Met Tyr Lys Tyr Asn Ile Tyr Asp Asn Ile Asp Tyr Ile Phe	1425	1430	1435
Ile Lys Lys Lys Asn Leu Phe Cys Tyr Thr Asn His Leu Ser Leu Leu	1445	1450	1455
Tyr Phe Thr Tyr Ile Tyr Ser Leu Asn Lys Phe Tyr Tyr Cys Thr Leu	1460	1465	1470
Tyr Tyr Asn Ile Ser Lys Cys Phe Tyr Tyr Lys Ile Asn Ile Glu Asn	1475	1480	1485
Ile His Phe Lys Asn Lys Ile Ile Leu Phe Phe Ile Phe Thr Gln Cys	1490	1495	1500
Lys Tyr Ile Tyr Ile Lys Phe Phe Arg Leu Leu Val Gln Ser Ile Phe	1505	1510	1515
Ser Ser Ser Glu Phe Gln Lys Val Gly Lys Leu Ser Leu Tyr Ile Leu	1525	1530	1535
Ser Asn Ile Ile Leu Leu Leu Val Lys Asn Ser Arg Met Lys Leu Asn	1540	1545	1550
Ile Lys Lys Lys Lys Ile Ile Lys Asn Ile Ser Lys His Ile Tyr Ser	1555	1560	1565
Asn Asn Glu Phe Ile Asn Asn Asn Lys Ile Lys Lys Ile His Thr Asn	1570	1575	1580
Asn Asn Ser Met Ser Lys Asn Leu Phe Ile Cys Asn Lys Leu Leu Asn	1585	1590	1595
Ile Gln Trp Asn Tyr Ile Phe Pro Met Asp Leu Phe Ile Ser Ser Asn	1605	1610	1615
Leu Ser His Glu Thr Glu Leu Ile Ile Asn Lys Leu Glu Gln Asn Ile	1620	1625	1630
Leu Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn	1635	1640	1645
Asn Lys His Asn Asn Asn Asn Ile Arg Gly Lys Lys Asn Tyr Asp Tyr	1650	1655	1660
Gln Asn Ile Glu Lys Leu Phe Tyr Ser Lys Glu Thr His Met Ile Asn	1665	1670	1675
Lys Met Asn Ile Leu Lys Ile Lys Asp Ile Lys Asn Ala Gln Asn Asp	1685	1690	1695
Glu Cys Ser Gln Asn Ile Lys Tyr Ile Lys Asn Ser Ile Ile Asn Leu	1700	1705	1710
Asn Asn Phe Lys Asn Glu Leu Phe Thr His Ile Pro Phe Leu Ile Lys	1715	1720	1725

Gln Tyr Lys Gln Tyr Ile Ile Val His Glu Lys Asn Lys Cys Ile Asn  
 1730 1735 1740

Asn Lys Val Gln Asn Phe Asn Gln Lys Asn His Leu Ile Ser Gln Thr  
 1745 1750 1755 1760

Phe Asn Lys Ile Asp Glu Ser Ser Phe Ile Tyr Phe Asp Asp Asp Ile  
 1765 1770 1775

Glu His Glu Ile Phe Thr Leu Cys Gln Asn Phe Leu Ser Tyr Asp Tyr  
 1780 1785 1790

Val Thr Thr Asn Phe Cys Ile Ser Lys Lys Ser Leu Tyr Tyr Asp Leu  
 1795 1800 1805

Leu Met Tyr Leu Lys Gly Thr Asn Phe  
 1810 1815

<210> 160  
 <211> 141  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 160  
 Met Leu Asn Phe Ile Leu Leu Gln Asn Arg Gln Gly Lys Thr Arg Phe  
 1 5 10 15

Ser Lys Trp Tyr Ile Asn Cys Asn Glu Lys Lys Gln Lys Lys Ile Glu  
 20 25 30

Arg Asp Ile Asn Lys Ile Leu Ile Asn Arg Ser Arg Ser Tyr Ala Asn  
 35 40 45

Ile Phe Val Tyr Glu Asn Phe Lys Ile Val Tyr Arg Leu Tyr Ala Gly  
 50 55 60

Leu Tyr Phe Val Val Cys Ile Glu Asn Glu Asn Glu Leu Tyr Ile Leu  
 65 70 75 80

Glu Phe Ile His Phe Met Ala Gln Leu Leu Asp Thr Phe Phe Thr Asn  
 85 90 95

Val Cys Glu Leu Asp Leu Leu Phe Asn Phe His Phe Leu Tyr Tyr Phe  
 100 105 110

Phe Asp Asn Ile Ile Leu Gly Gly Tyr Ile Tyr Glu Ile Asn Arg Asn  
 115 120 125

Ile Ile Leu Asp Lys Ile Asn Lys Ile Lys Lys Leu Ile  
 130 135 140

<210> 161  
 <211> 106  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 161  
 Met Asp Asn Glu Tyr Lys Lys Phe Ile Glu Ile Arg Lys Arg Glu Asn  
 1 5 10 15

Lys Ile Gly Asp Phe Lys Ile Thr Asn Ile Asp Ile Asn Thr Phe Lys  
 20 25 30

Lys Tyr Lys His Lys Asn Asn Pro Thr Phe Ser Thr Glu Phe Lys Ile  
 35 40 45

Phe Ile Thr Gly Ile Ile Ile Ser Met Trp Cys Val Phe Ala Ile Tyr

50                      55                      60  
 Leu Thr Ile Arg Ile Met Ser Pro Asp Asn Phe Asp Trp Val Glu Asp  
 65                      70                      75                      80  
 Glu Arg Lys Arg Leu Glu Asp Ala Lys Lys Lys Ile Ile Leu Ile Lys  
 85                      90                      95  
 Glu Lys Asn Met Glu Lys Ser Ile Ala Glu  
 100                      105  
  
 <210> 162  
 <211> 524  
 <212> PRT  
 <213> Plasmodium falciparum  
  
 <400> 162  
 Met Gly Cys Ser Gln Ser Ser Asn Val Lys Asp Phe Lys Thr Arg Arg  
 1                      5                      10                      15  
 Ser Lys Phe Thr Asn Gly Asn Asn Tyr Gly Lys Ser Gly Asn Asn Lys  
 20                      25                      30  
 Asn Ser Glu Asp Leu Ala Ile Asn Pro Gly Met Tyr Val Arg Lys Lys  
 35                      40                      45  
 Glu Gly Lys Ile Gly Glu Ser Tyr Phe Lys Val Arg Lys Leu Gly Ser  
 50                      55                      60  
 Gly Ala Tyr Gly Glu Val Leu Leu Cys Arg Glu Lys His Gly His Gly  
 65                      70                      75                      80  
 Glu Lys Ala Ile Lys Val Ile Lys Lys Ser Gln Phe Asp Lys Met Lys  
 85                      90                      95  
 Tyr Ser Ile Thr Asn Lys Ile Glu Cys Asp Asp Lys Ile His Glu Glu  
 100                      105                      110  
 Ile Tyr Asn Glu Ile Ser Leu Leu Lys Ser Leu Asp His Pro Asn Ile  
 115                      120                      125  
 Ile Lys Leu Phe Asp Val Phe Glu Asp Lys Lys Tyr Phe Tyr Leu Val  
 130                      135                      140  
 Thr Glu Phe Tyr Glu Gly Gly Glu Leu Phe Glu Gln Ile Ile Asn Arg  
 145                      150                      155                      160  
 His Lys Phe Asp Glu Cys Asp Ala Ala Asn Ile Met Lys Gln Ile Leu  
 165                      170                      175  
 Ser Gly Ile Cys Tyr Leu His Lys His Asn Ile Val His Arg Asp Ile  
 180                      185                      190  
 Lys Pro Glu Asn Ile Leu Leu Glu Asn Lys His Ser Leu Leu Asn Ile  
 195                      200                      205  
 Lys Ile Val Asp Phe Gly Leu Ser Ser Phe Phe Ser Lys Asp Asn Lys  
 210                      215                      220  
 Leu Arg Asp Arg Leu Gly Thr Ala Tyr Tyr Ile Ala Pro Glu Val Leu  
 225                      230                      235                      240  
 Arg Lys Lys Tyr Asn Glu Lys Cys Asp Val Trp Ser Cys Gly Val Ile  
 245                      250                      255  
 Leu Tyr Ile Leu Leu Cys Gly Tyr Pro Pro Phe Gly Gly Gln Asn Asp  
 260                      265                      270  
 Gln Asp Ile Ile Lys Lys Val Glu Lys Gly Lys Tyr Tyr Phe Asp Phe

275                      280                      285  
 Asn Asp Trp Lys Asn Ile Ser Glu Glu Ala Lys Glu Leu Ile Lys Leu  
     290                                      295                      300  
 Met Leu Thr Tyr Asp Tyr Asn Lys Arg Ile Thr Ala Lys Glu Ala Leu  
     305                                      310                      315                      320  
 Asn Ser Lys Trp Ile Lys Lys Tyr Ala Asn Asn Ile Asn Lys Ser Asp  
                                     325                                      330                      335  
 Gln Lys Thr Leu Cys Gly Ala Leu Ser Asn Met Arg Lys Phe Glu Gly  
                                     340                                      345                      350  
 Ser Gln Lys Leu Ala Gln Ala Ala Ile Leu Phe Ile Gly Ser Lys Leu  
                                     355                                      360                      365  
 Thr Thr Leu Glu Glu Arg Lys Glu Leu Thr Asp Ile Phe Lys Lys Leu  
     370                                      375                      380  
 Asp Lys Asn Gly Asp Gly Gln Leu Asp Lys Lys Glu Leu Ile Glu Gly  
     385                                      390                      395                      400  
 Tyr Asn Ile Leu Arg Ser Phe Lys Asn Glu Leu Gly Glu Leu Lys Asn  
                                     405                                      410                      415  
 Val Glu Glu Glu Val Asp Asn Ile Leu Lys Glu Val Asp Phe Asp Lys  
                                     420                                      425                      430  
 Asn Gly Tyr Ile Glu Tyr Ser Glu Phe Ile Ser Val Cys Met Asp Lys  
                                     435                                      440                      445  
 Gln Ile Leu Phe Ser Glu Glu Arg Leu Arg Asp Ala Phe Asn Leu Phe  
                                     450                                      455                      460  
 Asp Thr Asp Lys Ser Gly Lys Ile Thr Lys Glu Glu Leu Ala Asn Leu  
     465                                      470                      475                      480  
 Phe Gly Leu Thr Ser Ile Ser Glu Gln Met Trp Asn Glu Val Leu Gly  
                                     485                                      490                      495  
 Glu Ala Asp Lys Asn Lys Asp Asn Met Ile Asp Phe Asp Glu Phe Val  
                                     500                                      505                      510  
 Asn Met Met His Lys Ile Cys Asp Asn Lys Ser Ser  
                                     515                                      520

&lt;210&gt; 163

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 163

Met Phe Ile Asp Gln Gly Tyr Glu Lys Phe Val Thr Lys Ile Asn Asn  
     1                                      5                                      10                                      15  
 Glu Leu Val His Glu Met Asp Arg Ser Tyr Glu Tyr Ile Asn Leu Ser  
                                     20                                      25                                      30  
 Tyr Asp Lys Glu Gln Glu Lys Glu Tyr Val Asn Asn Tyr Leu Asn Asn  
                                     35                                      40                                      45  
 Tyr Ile Asp Pro Glu Lys Asn Asn Glu Ile Tyr Phe Ser Thr Asn Ser  
                                     50                                      55                                      60  
 Asp Thr Ile Ser Glu Val Asp Glu Thr Asn Tyr His Glu Lys Val Asn  
     65                                      70                                      75                                      80  
 Asn Lys Ser Ile Glu Gln Tyr Lys Asn Phe Glu Lys Asp Glu Ser Leu

```
<210> 164
<211> 1193
<212> PRT
<213> Plasmodium falciparum
```

354

130					135					140					
Phe 145	Phe	Asn	Thr	Phe	Thr 150	Asn	Asn	Gly	Gln	Ala 155	Ser	Ser	Ser	Phe	Pro 160
Ser	Leu	Ser	Phe	Ser 165	Phe	Asn	Ser	Ile	Gly 170	Ser	Ser	Ile	Glu	Ser	Asp 175
Glu	Gly	Asp	Met 180	Tyr	Lys	Asp	Thr	Asn 185	Val	Val	His	Asp	Lys 190	Met	Glu
Val	Tyr	Asn 195	His	Asn	Asn	Asn	Asn 200	Asn	Asn	Asn	Tyr	Ile 205	Tyr	Asp	Lys
Ser	Gly 210	Lys	Ala	Phe	Ser	Gln 215	Lys	Asn	Glu	Tyr	Glu 220	Asp	Ile	Ile	Ile
Thr 225	Lys	Asp	His	Thr	Ala 230	Leu	Asn	Asn	His	Glu 235	Tyr	Asp	His	Leu	Ser 240
Ser	Lys	His	Asp	Asp 245	Asn	Tyr	Asn	Asp	Asn 250	Asn	Asn	Asn	Asn	Asn	Asn 255
Cys	Asn	Asn	Asn 260	Cys	Asn	Asn	Tyr	Tyr 265	Asn	Asn	Ala	Ser	Leu	Met	Lys
Asn	Glu	Lys 275	Ser	Ser	Gln	Ile	Ile 280	Lys	Met	Tyr	Lys	Asn 285	Lys	Ile	Asp
Ile 290	Leu	Asn	Met	Gln	Tyr	Asn 295	His	Phe	Phe	Val	His 300	Arg	Cys	Lys	Asn
Glu 305	Gly	Lys	Cys	Ile	Leu 310	Leu	Ile	Lys	Ser	Tyr 315	Phe	Asn	Asp	Tyr	Leu 320
Cys	Ala	Leu	Val	Asn 325	Ser	Leu	Tyr	Ile	Tyr 330	Ser	Lys	Asp	Ile	Tyr	Ser 335
Ile	Lys	Asn	Phe 340	Asn	Ser	Lys	Gly	Glu 345	Gly	Lys	Asn	Lys	Trp 350	Lys	Asp
Lys	Asn	Glu 355	Asn	Asp	Gln	Asn	Gly 360	Asp	Asn	Ile	Ile	Asn 365	Asp	Asp	Asn
Ile 370	Ile	Asn	Asp	Asp	Asn	Ile 375	Ile	Asn	Asp	Asp	Asn 380	Ile	Ile	Asn	Asp
Asp 385	Asn	Val	Ile	Asn	Asp 390	Asp	Asn	Val	Ile	Asn 395	Gly	Asp	Asn	Ile	Ile 400
Asn	Asp	Asp	Asn	Val 405	Ile	Tyr	Asp	Asp	Asn 410	Ile	Ile	Asn	Asp	Asn	Asn 415
Ile	Ile	Asn	Asp 420	Asn	Asn	Ile	Ile	Asn 425	Asp	Asp	Asn	Ile	Ile	Asn	Asp 430
Asn	Asn	Ile 435	Ile	Tyr	Asp	Asn	Asn 440	Ile	Ile	Tyr	Asp	Asp 445	Ile	Leu	Asn
Asn	Lys 450	Asn	Leu	Ser	Lys	Tyr 455	Lys	Met	Lys	Asp	Val 460	Arg	Gly	Lys	Gln
Asn 465	Phe	Arg	Asn	Ser	Glu 470	Thr	His	Val	Ile	Tyr 475	Gln	Asn	Ser	Lys	Ser 480
Ser	Gln	Asn	Lys	Glu 485	Ser	Lys	Tyr	Ser	Thr 490	Ile	Met	Asn	His	Lys	Lys 495
Asp	Asp	Thr	Tyr 500	Ser	Phe	Lys	Thr	His 505	Lys	Arg	Asn	Asp	Val 510	His	Phe

Asn Ile Ile His Lys Gln Lys Ile Glu Glu His His Gly Asn Lys Glu  
 515 520 525  
 Lys Lys Glu Arg Lys Ile Ile Lys Lys Gln Asn Lys Ile Ile Ser Lys  
 530 535 540  
 Asn Lys Lys Glu Tyr Lys Lys Gly Lys Lys Lys Lys Lys Phe Gly Glu  
 545 550 555 560  
 Asn Tyr Ile Pro Ile Leu Asn Thr Leu Ile Ser Phe Ile Glu Val Ile  
 565 570 575  
 Tyr Lys Asn Val Phe Lys Lys Val Leu Ile Lys Ile Ser Lys Ser Lys  
 580 585 590  
 Ser Ile Asn Asp Leu Lys Leu Tyr Ser Tyr Ile Glu Lys Ile Tyr Glu  
 595 600 605  
 Tyr Asn Thr Tyr Tyr Cys Leu Lys Asn Arg Leu Lys Lys Phe Cys Phe  
 610 615 620  
 Thr Leu Phe Phe Ser Val Thr Leu Lys Asn Leu Ile Lys Cys Tyr Ile  
 625 630 635 640  
 Cys Lys Ile Lys Arg Glu Glu Leu Asn Lys Ser Asn Phe Glu Lys Phe  
 645 650 655  
 Gln Ser Thr Leu Ile Tyr Asp Thr Cys Ser Phe Ile Asn Ile Tyr Asn  
 660 665 670  
 Gln Leu Gly Gln Thr Asn Phe Lys Asp Ile Phe Arg Asn Lys Tyr Val  
 675 680 685  
 Asn Phe Leu Ile Tyr Ile Lys Asn Ile Leu Thr Leu Pro Tyr Asp Lys  
 690 695 700  
 Leu Leu Arg Val Pro Ile Lys Asn Lys Tyr Phe Phe Phe Tyr Ile Lys  
 705 710 715 720  
 Asn Lys Arg Ile Asp Ile Pro Phe Gln Lys Phe Phe Asn Glu Tyr Lys  
 725 730 735  
 Ile Lys Asn Glu Lys Ile Phe His Ala Asn Lys Asn Gly Lys Ser Leu  
 740 745 750  
 Leu Leu Asp Arg Tyr His Tyr Leu Leu Asn Glu Ala Lys Gly Asn Thr  
 755 760 765  
 Met Ser Cys Arg Asn Thr Ser Lys Ser Ser Leu Phe Phe Leu Lys Asn  
 770 775 780  
 Ser Asn Ser Met His Glu Lys Ile Tyr Asn Ile Leu Lys Thr Phe Asn  
 785 790 795 800  
 Pro Leu Asn Asn Leu Tyr Ser Lys Val Asn Glu Glu Asp Gln Glu Gly  
 805 810 815  
 Val Ile Asn Ser Tyr Asn Asn Asp Glu Phe Glu Asp Glu Tyr Thr Ser  
 820 825 830  
 Ile Lys Thr Tyr Asp Ser Lys Asn Asn Ile Tyr Met Asp Asn Tyr Asp  
 835 840 845  
 Glu Asn Glu Glu His Asn Lys Asp Asn Val Tyr Tyr Ser Ser Ile Ser  
 850 855 860  
 Ser Thr Ser Ser Ser Lys Thr Glu Thr Asn Ile Ser Asn Thr Asp Val  
 865 870 875 880



Ser Thr Ser Ser Lys Ser Ser Cys Lys Tyr Arg Asn Lys Asp Ser Val  
 885 890 895  
 Asn Ser Ser Asp Ile Ile Ile Ser Ser Val Asp Asn Met Gly Asn Gln  
 900 905 910  
 Asp Asn Glu Gly Asn Lys Leu Cys Arg Asn Val Asn Lys Glu Val Asp  
 915 920 925  
 Leu Lys Lys Arg Lys Ser Ile Tyr Glu Glu Lys Lys Arg Asp Tyr Ile  
 930 935 940  
 Ser Cys Ser Gly Asp Asn Lys Asn Asp Asp Asp Lys Asn Asp Asp Asn  
 945 950 955 960  
 Lys Asn Asp Asp Asp Lys Asn Asp Asp Asp Lys Asn Asp Asp Asp Lys  
 965 970 975  
 Asn Asp Asp Asp Lys Asn Asp Asp Asp Lys Asn Asp Asp Asp Lys Asn  
 980 985 990  
 Asp Asp Asp Asp Asp Asn Lys Asn Asp Asn His Asn Asn Asn Ile Ser  
 995 1000 1005  
 Ser Ser Ser Ser Ser Cys Cys Ser His Phe Ser Phe Ser Tyr Asn Thr  
 1010 1015 1020  
 Ile Asp Asp Lys Lys Lys Lys Gly Lys Lys Lys Lys Lys Glu Thr Glu  
 1025 1030 1035 1040  
 Ser Tyr Tyr Asp Val Ser Ser Met Asn Ser Asn Asp Leu Tyr Glu Glu  
 1045 1050 1055  
 Lys Gln Asn Ile Gln Thr Ile Phe Gln Arg Lys Lys Lys Ile Asn Asn  
 1060 1065 1070  
 Asn Asn Met Lys Asn Pro Phe Glu Met Asn Ile Asn Glu Lys Lys Asn  
 1075 1080 1085  
 Ser Ile Lys Val Tyr Ile Lys Asn Ser Asn Gln Gln Tyr Asp Arg Lys  
 1090 1095 1100  
 Ile Leu Leu Leu Lys Asp Asp Lys Ile Tyr Phe Tyr Asn Ser Glu Tyr  
 1105 1110 1115 1120  
 Ser Ile Thr Tyr Asp Ser Phe Tyr Phe Leu Met Glu Ile Lys Lys Ile  
 1125 1130 1135  
 Tyr Ser Cys Asp Gly Phe Phe Asp Ser Leu Ile Asn Ser Glu Lys Leu  
 1140 1145 1150  
 Ser Ser Val Asn Ser Ser Tyr Thr Ser Thr Glu Asp Asn Glu Phe Tyr  
 1155 1160 1165  
 Ser Arg Lys Lys Asp Thr Leu Ser Ser Glu Ser Glu Trp Gln Lys Cys  
 1170 1175 1180  
 Gly Tyr Asp Ala Lys Ile Val Arg Lys  
 1185 1190

&lt;210&gt; 165

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 165

Met Pro Lys Lys Arg Arg Asn Gly Gly Arg Ser Lys His Asn Arg Gly  
 1 5 10 15

His Val Asn Pro Leu Arg Cys Ser Asn Cys Gly Arg Cys Val Pro Lys  
 20 25 30

Asp Lys Ala Ile Lys Arg Phe Asn Ile Arg Asn Ile Val Asp Thr Ser  
 35 40 45

Ala Gln Arg Asp Ile Lys Glu Ala Ser Val Tyr Ser Thr Phe Gln Leu  
 50 55 60

Pro Lys Leu Tyr Ile Lys Gln Cys Tyr Cys Val Ser Cys Ala Ile His  
 65 70 75 80

Ser Arg Phe Val Arg Val Arg Ser Arg Glu Gln Arg Arg Val Arg Lys  
 85 90 95

Glu Thr Ala Lys His Val Asn Pro Ser Gln Leu  
 100 105

<210> 166  
 <211> 519  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 166  
 Met Leu Lys Tyr Ile Asn Lys Ser Lys Ala Leu Leu Leu Arg Lys Met  
 1 5 10 15

Ser Thr Val Lys Asn Met Ser Lys Ser Asn Gln Leu Thr Lys Glu Ile  
 20 25 30

Phe Met Ala Leu Lys Glu Lys Thr Ser Leu Leu Gln Lys Glu Lys Leu  
 35 40 45

Tyr Ile Glu Pro Val Glu Glu Asn Leu Cys Leu Ser Asn Leu Glu Thr  
 50 55 60

Ser Cys Pro Leu Thr Tyr Phe Thr Leu Met Tyr Lys Ser Arg Ile Asp  
 65 70 75 80

Thr Asn Val Val Glu Leu Lys Val Val Pro Lys Cys Glu Gly Ser Lys  
 85 90 95

Gly Thr Asn Asn Cys Met Leu Asn Asn Asn Asp Lys Thr Ser Phe Ser  
 100 105 110

Thr Asp Lys Gly Phe Ile Asn Met Lys Glu Glu Gly Glu Glu Lys  
 115 120 125

Lys Asn Glu Thr Asn Met Asn Val Glu Asn Lys Lys Val Asp Phe Phe  
 130 135 140

Asp Ser Phe Val Gln Leu Asn Ile Pro Val Leu Lys Asp Phe Glu Lys  
 145 150 155 160

Val Phe Phe Tyr Lys His Ile Ile Glu Leu Ile Asp Ser Leu Ala Ala  
 165 170 175

Asp Val Val Tyr Arg His Ser Ile Gly Val Tyr Lys Arg Asn Asp Lys  
 180 185 190

Tyr Asn Phe Val Thr Val Leu Phe Asn Asn Leu Lys Thr Tyr Glu Lys  
 195 200 205

Asn Val Phe His His Glu Phe Ser Phe Ala Leu His Asp Ser Tyr Pro  
 210 215 220

Leu Thr Ile Asn Cys Tyr Ile Val Asn Ser Gly Thr Thr Ser Tyr Ile  
 225 230 235 240

Leu Lys Leu Asp Phe Phe Gln Gln Asn Asn Leu Val Phe Asp Ile Tyr  
 245 250 255  
 Thr Thr Phe Val Asn Val Asn Cys Leu Thr Phe Lys Pro Gln Gln Val  
 260 265 270  
 Val Pro Val Leu Asn Ser Met Gln Asn Glu Lys Tyr Lys Gln Ile Lys  
 275 280 285  
 Ser Leu Cys Ser His Ile Lys Asp Val Gln Ser Leu Phe Asn Tyr Lys  
 290 295 300  
 Glu Val Lys Ser Lys Thr Leu His Pro Asn Asp Met Glu Ile Leu Ser  
 305 310 315 320  
 Asn Phe Phe Lys Lys Tyr Gln Thr Gln Asn Leu Gly Tyr Ile Lys Asn  
 325 330 335  
 Ile Asn Glu Tyr Thr Asn Ile Tyr Asp Asn Glu Gln Asn Glu Leu Val  
 340 345 350  
 Gln Asn Ser Asn Asp Asn Ile Leu Thr Ile Phe Asp Ser Ile Leu Asn  
 355 360 365  
 Leu Asn Asp Phe Ser Phe His Ala Gly Lys Val Gln Tyr Ala Cys Lys  
 370 375 380  
 Asp Thr Tyr Val Gln Ser Asn His Phe Ile Ser Ser Glu Phe Lys Asn  
 385 390 395 400  
 Ile His Asn Phe Thr Phe Gly Gly His Leu Ala Tyr Leu Ser Phe Cys  
 405 410 415  
 His Ala Met Val Val Ile Lys Lys Phe Leu Pro Lys Pro Ile Leu Met  
 420 425 430  
 Gln Ile Asn Ser Ile Gln Tyr Ile Leu Pro Val Pro Val Asn Ser Glu  
 435 440 445  
 Val Leu Tyr Lys Gly Lys Val Val Tyr Ser Asp Gln His Ser Ile Gln  
 450 455 460  
 Val His Val Ala Thr Tyr Cys Phe Asp Phe Lys Lys Ser Ala Tyr Tyr  
 465 470 475 480  
 Leu Thr Thr Ile Cys Asp Met Ser Phe Glu Asn Asn Ser Asp Ile Ser  
 485 490 495  
 Phe Val Pro Gln Ser Gln Glu Glu Phe Lys Leu Tyr Met Leu Gly Tyr  
 500 505 510  
 Ile Arg Ser Gln Ile Leu Pro  
 515

<210> 167  
 <211> 330  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 167  
 Met Glu Asn Ile Pro Trp Val Glu Lys Tyr Arg Pro Lys Arg Leu Asp  
 1 5 10 15  
 Asp Ile Val His Gln Asn Asn Ala Val Met Met Leu Lys Glu Val Val  
 20 25 30  
 Arg Thr Lys Asn Met Pro His Leu Ile Phe His Gly Pro Pro Gly Thr  
 35 40 45

Gly Lys Thr Ser Ala Ile Asn Ala Leu Ala His Glu Leu Phe Gly Lys  
 50 55 60  
 Glu Asn Ile Ser Glu Arg Val Leu Glu Leu Asn Ala Ser Asp Asp Arg  
 65 70 75 80  
 Gly Ile Asn Val Val Arg Glu Lys Ile Lys Ala Tyr Thr Arg Ile Ser  
 85 90 95  
 Ile Ser Lys Asn Lys Ile His Ser Glu Thr Lys Glu Val Leu Pro Ser  
 100 105 110  
 Trp Lys Leu Val Val Leu Asp Glu Ala Asp Met Met Thr Glu Asp Ala  
 115 120 125  
 Gln Ser Ala Leu Arg Arg Ile Ile Glu Ile Tyr Ser Asn Val Thr Arg  
 130 135 140  
 Phe Ile Leu Ile Cys Asn Tyr Ile His Lys Ile Ser Asp Pro Ile Phe  
 145 150 155 160  
 Ser Arg Cys Ser Cys Tyr Arg Phe Gln Ser Ile Pro Ile Asn Ile Lys  
 165 170 175  
 Lys Glu Lys Leu Leu Tyr Ile Cys Gln Asn Glu Asn Ile Asp Ile Val  
 180 185 190  
 Asp Asp Ala Leu Glu Lys Ile Ile Glu Thr Thr Glu Gly Asp Leu Arg  
 195 200 205  
 Arg Ala Val Ser Ile Leu Gln Leu Cys Ser Cys Ile Asn Thr Lys Ile  
 210 215 220  
 Thr Leu Asn Ser Val Leu Asp Val Ser Gly Leu Pro Ser Asp Asn Ile  
 225 230 235 240  
 Val Tyr Lys Ile Ile Asp Ala Cys Lys Met Lys Asp Leu Lys Leu Val  
 245 250 255  
 Glu Lys Thr Val Gln Asp Ile Ile Glu Asp Gly Phe Asp Val Ala Tyr  
 260 265 270  
 Ile Phe Lys Ser Phe Asn Asn Tyr Phe Val Thr Asn Thr Glu Tyr Glu  
 275 280 285  
 Asp Ser Leu Lys Tyr Gln Ile Leu Leu Glu Leu Ser Arg His Asp Tyr  
 290 295 300  
 Arg Leu His Cys Gly Ala Thr Gln Tyr Ile Gln Leu Leu Ser Phe Ala  
 305 310 315 320  
 Ser Ser Val His Ser Leu Leu Asn Ser Val  
 325 330

<210> 168  
 <211> 307  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 168  
 Met Asp Ser Tyr Ile Glu Met Lys Ser Asn Val Leu Asn Lys Gln Tyr  
 1 5 10 15  
 Asp Ile Tyr Lys Ile Gln Asn Glu Tyr Asp Glu Thr Leu Ser Ile Tyr  
 20 25 30  
 Ser Ile Asp Asp Lys Tyr Ser Glu Asp Asp Met Leu Asn Asn Tyr Glu  
 35 40 45

Lys Thr Ser Asp Ile Glu Gln Asp Tyr Met Tyr Gln Lys Ile Asn Thr  
 50 55 60  
 Asp Asn Leu Asp Asn Ser Glu Tyr Glu Asp Thr Asn Ile Gly Ile Phe  
 65 70 75 80  
 Asn Tyr Ile Tyr Glu Met Ile Thr Lys Lys Asn Glu Met Arg Lys Glu  
 85 90 95  
 Gln Met Lys Leu Thr Leu Phe Ser Ile Asn Arg Cys Val Asp Phe Phe  
 100 105 110  
 Asn Asp Phe Leu Phe Leu Ile Lys Val Phe Tyr Glu Met Lys Ile Ser  
 115 120 125  
 Glu Asn Ser Asn Met Leu Asn His Asn Ile Tyr Lys Leu Leu Phe Leu  
 130 135 140  
 Trp Leu Leu Phe Leu Tyr Val Thr Ser Phe Phe Thr Phe Tyr Phe Arg  
 145 150 155 160  
 Lys Tyr Tyr Ile Met Asn Leu Ile Pro Glu Lys His His Asn Leu Phe  
 165 170 175  
 Ser Leu Phe Lys Val Phe Asn Glu Ile Lys Thr Met His Pro Lys Asn  
 180 185 190  
 Ile Ser Val Leu Tyr Phe Tyr Asp Arg Ile Gln Arg Thr Tyr Ile Val  
 195 200 205  
 Ile Asn Lys Phe Phe Glu Asp Val Pro Gln Phe Leu Leu Cys Leu Leu  
 210 215 220  
 Tyr Ile Thr Leu Asn Gly Lys Asp Lys Phe Ile Ile Phe Asn Met Leu  
 225 230 235 240  
 Tyr Ser Ile Ile Tyr Phe Val Ile Asn Ala Ile Tyr His Gly Leu Asn  
 245 250 255  
 Tyr Pro Leu Met Gly Thr Leu Asn Leu Phe Phe Ser Thr Tyr Leu Leu  
 260 265 270  
 Glu Leu Tyr Ile Asn Lys Lys Lys Lys Lys Asn Ile Tyr Ile Tyr Ile  
 275 280 285  
 Tyr Ile Tyr Ile Cys Met Tyr Leu Phe Leu Cys Ile Tyr Ile Tyr Asn  
 290 295 300  
 Phe Ile Ile  
 305

&lt;210&gt; 169

&lt;211&gt; 807

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 169

Met Ala Val Glu Ser Lys Pro Asn Asn Ser Ser Lys Glu Lys Asn Glu  
 1 5 10 15  
 Glu Asn Asp Ile Ile Asn Lys Cys Asp Asp Ser Asn Lys Ile Asn Gly  
 20 25 30  
 Lys Glu Asn Ile Phe Ala Val Glu Lys Val Gly Ile Asn Glu Ser Gly  
 35 40 45  
 His Met Ser Asn Asp Asn Ile Asn Lys Asn Gln Glu Lys Asn Lys Lys  
 50 55 60

Lys Lys Lys Lys Lys Asn Thr His Lys Lys Val Asn Ile Asn Asn Thr  
 65 70 75 80  
 His Ile Asn Ile His Thr Thr Asn Asp Lys Asn Asn Gly Gln Asp Ile  
 85 90 95  
 Asn Lys Pro Glu Val Ile Glu Arg Asp Asn Ile Ile Asn Ile Lys Asn  
 100 105 110  
 Asp Thr Asn Asn Ile Leu Asp Ser Ser Tyr Asn Glu Glu Gly Asn Glu  
 115 120 125  
 Asn Asn Arg Asn Asp Ile Asn Asn Asn Asn Asn Asn Asn Ile Asn  
 130 135 140  
 Ile Asn Asn Asn Asn Ile Asn Asn Ser Cys Ser Asn Asn Tyr Gly Leu  
 145 150 155 160  
 Lys Lys Lys Ile Thr Leu Leu Lys Arg Asn Asp Ile Lys Asp Glu Gly  
 165 170 175  
 Tyr Asn Asn Glu Asn Ile Thr Thr Leu Asn Asn Lys Asn Asn Leu Lys  
 180 185 190  
 Asn Asn Asn Asn Tyr Asn Asp Asn Arg Asn Asn Asn Asn Asn Lys  
 195 200 205  
 Asn Asn Ile Asn Asn Asn Asn Asn Asn Asn Cys Cys Ser Glu Lys Thr  
 210 215 220  
 Leu Glu Gln Arg Glu Lys Glu Tyr Asn Lys Ile Arg Ala Arg Ile Phe  
 225 230 235 240  
 Ser Asn Phe Asn Lys Lys Gln Lys Asn Val Gln Lys Thr Glu Gln Asn  
 245 250 255  
 Asn Leu Asn His Thr Tyr Leu Asn Asn Asn Ile Ile Asn Asn Ile Asn  
 260 265 270  
 Asn Gly Asp Asn Gln Tyr Ala Tyr Ile Asn Asn Phe Tyr His Ile Tyr  
 275 280 285  
 His Asn Asn Ser Tyr Asn His Ile Tyr Arg Gln Asn Asn Ile Pro Ile  
 290 295 300  
 Cys Asn Ile Asn Asn His Ala Pro Asn Ile Glu Lys Leu Asn Asn Pro  
 305 310 315 320  
 Tyr Tyr Tyr His Asp Asn His Ile Ala Tyr Thr Asn Tyr Met Tyr Ser  
 325 330 335  
 Thr Gln Asn Lys Met Asn Asn Met Lys Thr Lys Gln Ile Gly His Tyr  
 340 345 350  
 Gly Ile Asn Asn Glu Asp Asn Asn Asn Asn Asn Asn Ile Asn  
 355 360 365  
 Asn Asn Asn Asn Asn Ile Asn Asn Asn Asn Ile Asn Asn Asn Asn  
 370 375 380  
 Val Pro Leu Cys Ile Pro Gln Leu Asp Asn Tyr Asn Lys Thr Lys Asn  
 385 390 395 400  
 Asn Phe Asn Gln Gly Thr Asn Asn Phe Asn Gln Gly Thr Asn Asn Phe  
 405 410 415  
 Asn Lys Cys Thr Asn Asn Phe Asn Asn Ala Lys Asn His Ile Lys His  
 420 425 430  
 Asn Ile Asn Asn Thr Asn Lys Asn Ile Glu His Leu Asn Asn His Ser  
 435 440 445

435					440					445					
Ile	Tyr	Asn	Phe	Val	Tyr	Pro	Glu	Asn	Lys	Asn	Ile	Tyr	Asp	Ala	Asn
450						455					460				
Gly	Asn	Leu	Ile	Asn	Asn	Asn	Ile	Ser	Tyr	Thr	Gln	Leu	Lys	Met	Asn
465				470						475					480
Asn	Asn	Ile	Asn	Phe	Asn	Ile	His	Met	Glu	Ser	Pro	Ile	Asn	Gln	Gln
				485					490					495	
His	Asn	Asn	Thr	Phe	Lys	Val	Asn	Asn	Asp	Thr	Asn	Phe	Phe	Asn	Glu
			500					505					510		
Pro	Thr	Asn	Lys	Met	Lys	Lys	Lys	Asn	Lys	Glu	Lys	Lys	Asn	Ile	His
		515					520					525			
Phe	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Lys	Cys	Leu	Tyr	Lys	Asp	
		530				535				540					
Ile	Asn	Gln	Asn	Asp	His	Asn	Asn	Ser	Ile	Ile	Asn	Thr	Asn	Gln	Asn
545					550					555					560
Phe	Asp	His	Ile	Asn	Asn	Val	Lys	Asn	Thr	Glu	Gln	Asn	Leu	Gln	Lys
				565					570					575	
Lys	His	Asn	Lys	Met	Ser	Gln	Val	Ser	Lys	Gln	Ser	Asn	Asn	Lys	Asn
			580					585					590		
Asn	Lys	Asn	Asn	Ser	His	Leu	Lys	Lys	Gln	Ile	Asn	Ile	Asn	Thr	Asn
		595					600					605			
Asn	Asn	Met	Asp	Asn	Lys	Asn	Asn	Ser	His	Ile	Ser	Lys	Asn	Val	Ile
		610				615					620				
Val	Asp	Asp	Asn	Lys	Leu	Lys	Ser	Ser	His	Ala	Asp	Asn	Ser	Asn	Glu
625					630					635					640
Ile	Val	Thr	Lys	Gly	Lys	Lys	Lys	Lys	Asn	Thr	Asn	Lys	Lys	Lys	Lys
				645					650					655	
Ile	Asn	Asn	Ile	Asn	Ser	Val	Asn	Asn	Val	Asn	Asn	Ile	Asn	Ser	Met
			660					665					670		
Asn	Asn	Ile	Asn	Ser	Met	Asn	Asn	Ile	Ile	Ser	Met	Asn	Asn	Val	Asn
		675					680					685			
Asn	Met	Asn	Asn	Pro	Met	Tyr	Phe	Pro	Asn	Val	Asn	Ile	Gln	Lys	Asp
		690				695					700				
Asp	Ser	Asn	Ile	Ala	Leu	Leu	Tyr	Asn	Asn	Lys	Pro	Asn	Ile	Asp	Phe
705					710					715					720
Asn	Asn	Phe	Gln	Leu	Asn	His	Ile	Asn	Asn	His	Met	Ile	Gln	Asn	Asn
				725					730					735	
Ile	Met	Thr	Asn	Asn	Val	Met	Leu	Asn	Asn	Asn	Leu	Thr	Thr	Ser	Asn
			740					745					750		
Phe	Asn	Tyr	Asn	Leu	Ile	Asn	Tyr	Ser	Tyr	Glu	Pro	Phe	Tyr	Glu	Glu
		755					760					765			
Asn	Leu	Met	Asn	Asp	Leu	Asp	Tyr	Cys	Arg	Asp	Ile	Ser	Leu	Tyr	Glu
		770				775					780				
Lys	Arg	Tyr	Asp	Arg	Gly	Asp	Asn	Leu	Gln	Gln	Asn	His	Lys	Arg	Tyr
785					790					795					800
Asp	Ile	Asp	Phe	Pro	Ser	Leu									
				805											

<210> 170  
 <211> 351  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 170

Met Asn Thr Lys Cys Leu Asn Lys Tyr Ile Ile Ile Ile Leu Leu Phe  
 1 5 10 15  
 Ser Leu Ile Ile Lys Arg Tyr Thr Ser Leu Asn Arg Tyr His Asn Val  
 20 25 30  
 Cys Lys Ile Lys Asn Gln Ser Cys Phe Leu Asn Pro Cys Thr His Lys  
 35 40 45  
 Asn Asn Asp Lys Arg Asn Ser Tyr Leu Tyr Thr His Tyr Thr Arg Asn  
 50 55 60  
 Asn Ser Ser Ile Asn Ile Arg Arg Asn Asn Phe Leu Asp Lys Gln Asn  
 65 70 75 80  
 Asp Asn Ile Ser Asp Tyr Ile Tyr Gly Leu Asn Ser Val Tyr Ala Val  
 85 90 95  
 Leu Lys Lys Asn Glu Arg Thr Ile Glu Glu Val Ile Asn Ile Lys Leu  
 100 105 110  
 Asn Arg Lys Ile His Lys Gln Asn Tyr Glu Tyr Ile Phe Asp Glu Leu  
 115 120 125  
 Lys Lys Arg Asn Val Ser Ile Gln Tyr Met Glu Lys Tyr Lys Met Asn  
 130 135 140  
 Glu Leu Val Gly Gly Phe Pro His Asn Asp Ile Ile Met Lys Thr His  
 145 150 155 160  
 Tyr Arg Tyr Met Asn Asn Tyr Lys Asp Phe Ile Lys Asn Ile Lys His  
 165 170 175  
 Leu Pro Asn Lys Asn Asn Ile Phe Ile Cys Leu His Asp Val Tyr Asp  
 180 185 190  
 Asn Met Asn Ile Gly Asn Val Cys Arg Ser Ile Phe Phe Phe Gly Gly  
 195 200 205  
 His Thr Ile Phe Leu Lys Lys Lys Lys Val Asn Glu Lys Lys Asn  
 210 215 220  
 Asn Val Lys Ile Asp Thr Pro Ile Leu His Ser Ser Val Gly Ser Ser  
 225 230 235 240  
 Glu Phe Leu Asn Phe Tyr His Ile Asn Asn Met Ala Asn Phe Met Asn  
 245 250 255  
 His Met Lys Leu Asn Gly Phe Thr Ile Tyr Ser Thr Ser Cys His Lys  
 260 265 270  
 Asn Asn Thr Ser Cys His Lys Tyr Ile Asn Leu Asn Asn Ile Lys Ile  
 275 280 285  
 Arg Glu Asn Glu Lys Ile Leu Ile Ile Leu Gly Asn Glu Ser Lys Gly  
 290 295 300  
 Leu Lys Glu Asp Ile Leu Glu Asn Ser Asp Tyr Cys Val Tyr Ile Asn  
 305 310 315 320  
 Asn Leu Ser Tyr Asn Glu Asn Thr Gln Phe His Ile Asp Ser Leu Asn  
 325 330 335



Val Asn Asn Val Cys Ser Ile Met Leu Asn His Phe Tyr Ser Ile  
 340 345 350

<210> 171  
 <211> 562  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 171

Met Lys Tyr Lys Asn Tyr Asn Thr Ala Thr Ile Leu Glu Asn Phe Asp  
 1 5 10 15  
 Lys Lys Leu Asn Lys Asn Tyr Lys Val Phe Asn Asn Glu Glu Ile Lys  
 20 25 30  
 Lys Met Asp Glu Glu Tyr Glu His Lys Ile Lys Lys Lys Glu Gln Leu  
 35 40 45  
 Lys Leu Gln Lys Lys Gln Ile Lys Lys Gln Glu His Lys Asn Glu Lys  
 50 55 60  
 Lys Lys Lys Asn Lys Asn Leu Asn Lys Lys His Asn Gln Asn Asn Thr  
 65 70 75 80  
 Asn Asn Ser Asp Asn Ser Phe His Asn Ser Asp Asn Asn Ile Asn Gln  
 85 90 95  
 Asn Gly Asn Tyr Thr Asn Asn Ser Asp Tyr Asn Ile Ile Asn Asn Asn  
 100 105 110  
 His Asp Asn Ile Asn Phe Ile His Gly Asn Lys Asn Lys Asn His Asp  
 115 120 125  
 Asn Ser Phe His Asn Asn Asp Asp Val Lys Asn Gly Glu Val Lys Asn  
 130 135 140  
 Leu Val Thr Asn Glu Glu Arg Glu Lys Gln Asn Val Thr Phe Glu Asp  
 145 150 155 160  
 Leu Asn Ile Cys Glu Glu Ile Leu Glu Ser Ile Lys Glu Leu Gly Trp  
 165 170 175  
 Lys Lys Pro Thr Glu Ile Gln Arg Glu Ile Leu Pro His Ala Phe Leu  
 180 185 190  
 Lys Lys Asp Ile Ile Gly Leu Ser Glu Thr Gly Ser Gly Lys Thr Ala  
 195 200 205  
 Cys Phe Ile Ile Pro Ile Leu Gln Asp Leu Lys Val Asn Lys Gln Ser  
 210 215 220  
 Phe Tyr Ala Leu Val Ile Ser Pro Thr Arg Glu Leu Cys Ile Gln Ile  
 225 230 235 240  
 Ser Gln Asn Phe Gln Ala Leu Gly Met Asn Leu Leu Ile Asn Ile Cys  
 245 250 255  
 Thr Ile Tyr Gly Gly Val Asp Ile Val Thr Gln Ser Leu Asn Leu Ala  
 260 265 270  
 Lys Lys Pro Asn Val Ile Val Ser Thr Pro Gly Arg Ile Leu Asp His  
 275 280 285  
 Leu Asn Asn Thr Lys Gly Phe Asn Leu Lys Asn Leu Lys Tyr Leu Val  
 290 295 300  
 Phe Asp Glu Ala Asp Lys Leu Leu Ser Gln Asp Phe Glu Ser Ser Ile  
 305 310 315 320

Asn Lys Leu Leu Leu Ile Leu Pro Pro Asn Arg Ile Thr Phe Leu Phe  
 325 330 335  
 Ser Ala Thr Met Thr Lys Asn Val Ala Lys Leu Lys Lys Ala Cys Leu  
 340 345 350  
 Lys Asn Pro Val Lys Val Glu Val Ser Asn Lys Tyr Ser Thr Val Ser  
 355 360 365  
 Thr Leu Ile Glu Thr Tyr Ile Phe Leu Pro Leu Lys Tyr Lys Tyr Thr  
 370 375 380  
 Tyr Leu Ser Ser Leu Cys Phe His Tyr Gln Thr Arg Asn Ile Ile Ile  
 385 390 395 400  
 Phe Thr Asn Thr Cys Ala Thr Ala Gln Lys Leu Asn Phe Phe Cys Arg  
 405 410 415  
 Asn Leu Gly Leu Lys Ser Ile Cys Leu His Gly Lys Leu Thr Gln Asn  
 420 425 430  
 Gln Arg Leu Ser Ser Leu Asn Ser Phe Lys Val Asn Lys Tyr Asn Ile  
 435 440 445  
 Leu Ile Ser Thr Gln Val Gly Ala Arg Gly Leu Asp Leu Gln Asp Ile  
 450 455 460  
 Lys Ile Val Ile Asn Phe Asp Ile Cys Ser Cys Lys Glu Tyr Ile His  
 465 470 475 480  
 Arg Val Gly Arg Thr Ala Arg Ala Gly Arg Ser Gly Lys Ser Ile Thr  
 485 490 495  
 Phe Val Thr Gln Tyr Asp Val Glu Asn Phe Leu Ala Ile Glu Lys Gln  
 500 505 510  
 Leu Asn Lys Lys Ile Asp Lys Phe Thr Asp Leu Asp Glu Asn Asp Val  
 515 520 525  
 Leu Leu Tyr His Glu Gln Thr Ile Glu Ala Leu Arg Leu Ser Glu Ile  
 530 535 540  
 Glu Met Lys Glu Asn Gln Glu Leu Tyr Lys Lys Asn Lys Phe Lys Lys  
 545 550 555 560  
 Lys Lys

&lt;210&gt; 172

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 172

Met Lys Ser Glu Val Thr Ile Glu Glu Asn Arg Asp Asn Pro Glu Asp  
 1 5 10 15  
 Gly Pro Leu Gly Leu Leu Ser Glu Cys Val Lys Asp Asn Ala Gln Val  
 20 25 30  
 Leu Ile Asn Cys Arg Asn Asn Arg Lys Ile Leu Gly Arg Val Lys Ala  
 35 40 45  
 Phe Asp Arg His Cys Asn Leu Leu Leu Thr Gly Val Arg Glu Ile Trp  
 50 55 60  
 Val Glu Val Val Lys Asp Lys Lys Lys Lys Lys Lys Ile Asn Lys Asp  
 65 70 75 80

Arg Tyr Ile Ser Ile Leu Phe Leu Arg Gly Asp Ser Val Ile Leu Ile  
85 90 95

Leu Arg Asn Pro Lys  
100

<210> 173

<211> 2380

<212> PRT

<213> Plasmodium falciparum

<400> 173

Met Gly Asn Thr Asn Arg Lys Asp Ile Ser His Lys Glu Tyr Asp Lys  
1 5 10 15

Ser Phe Ile Asn Ile Glu Ser Ala Glu Glu His Lys Asn Ile Asn Lys  
20 25 30

Asn Ile Lys Asn Lys Lys Phe Ile Asn Ile Asp Asn Ser Asn Asn Cys  
35 40 45

Asn Asn Ser Asn Ser Asn Asn Ser Asn Ser Asn Asn Asn Asn Asn  
50 55 60

Asn Asn Asn Ile Val Arg Asn Asn Asn Asn Phe Ile Asn Ala Asp Lys  
65 70 75 80

Lys Lys Asn Val Ile Leu Asn Glu Asp Asp Asp Ile Lys Asn Lys Glu  
85 90 95

Leu Val Asp Glu Ser Phe Val Asn Ile Phe Phe Tyr Glu Asn Tyr Phe  
100 105 110

Lys Asn Leu Phe Asn Leu Asn Asp Val Ser Asn Asn Lys Val Ile Asn  
115 120 125

Ile Ile Glu Gln Lys Glu Gly Asp Glu Arg Asn Ala Asp Asn Asn Leu  
130 135 140

Lys Asn Lys Asn Ile Val Arg Asp Asn Ile Asn Lys Ile Lys Asn Thr  
145 150 155 160

Arg Asn Val Asn Glu Ile Leu Ile Tyr Asn Asn Lys Tyr Ile Ile Asn  
165 170 175

Phe Leu Asn Asp Thr Thr Lys Cys Lys Ile Glu Ile Ala Asn Phe Ile  
180 185 190

Ser Phe Tyr Phe Phe Phe Leu His Ile Lys Asp Ile Leu Asn Lys Asn  
195 200 205

Asn Asp Asn Gly Leu Met Asn Lys Lys Lys Ser Ser Leu Lys Asp Ile  
210 215 220

Cys Asn Ile Lys Tyr Ile Tyr Lys Lys Ile Lys Thr Ser Lys Lys Tyr  
225 230 235 240

Ile Ser Ser Asn Asp Met Asp Thr Cys Ile Arg Asn Tyr Leu Tyr His  
245 250 255

Ile Asp Lys Lys Asn Tyr Pro Ile Ile Lys Lys Thr Lys Cys Pro Phe  
260 265 270

Leu Ser Asn Thr Lys Val Leu Tyr Asn Lys Arg Gly Tyr Met Ala Ser  
275 280 285

Cys Pro Leu Thr Val Lys Gly Lys Ile Lys His Lys Thr Asn Ile Ser  
290 295 300

Ser Lys Ile Lys Leu Lys Arg Glu Arg Asn Asp Ser Asn Met Phe Asn  
 305 310 315 320  
 Asn Met Ile Arg Lys Asp Asn Asn Met Asn Val Lys Gln Glu Gln Ile  
 325 330 335  
 His Asn Asn Asp Thr Val Asn Asn Asn Met Thr Thr Asn Val Asp Gly  
 340 345 350  
 Cys Ser Glu Pro Thr His Asp Asn Thr Phe Leu Asn Ile Glu Glu Glu  
 355 360 365  
 Glu Phe Lys Met Leu Lys Asn Tyr Leu Lys Asp Val Lys Glu Arg Lys  
 370 375 380  
 Lys Lys Tyr Lys Lys Gly Tyr Ile Ser Thr Ser Asn Phe Ile Ser His  
 385 390 395 400  
 Gly Val Arg Leu Gly Thr Thr Arg Ser Arg Ile Arg Gly Lys Cys Leu  
 405 410 415  
 Leu Lys Asn Lys Lys Met His Met Tyr Asp Asp Asn Glu Glu Leu Asn  
 420 425 430  
 Lys Lys Lys Lys Lys Lys Met Asn Lys Asp Asp Arg Ile Glu Asn Gly  
 435 440 445  
 Ile Met Glu Asp Val Asn Asp Lys Arg Lys Leu Asp Cys Asp Asn Lys  
 450 455 460  
 Ile Lys Phe Asn Asp Ile Glu Lys Glu Asp Leu Asn Ile Cys Asp Thr  
 465 470 475 480  
 Glu Asn Val Asp Asn Asn Ser Asn Asn Asn Asn Asn Asn Asn Asn  
 485 490 495  
 Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Gly Tyr  
 500 505 510  
 Lys Lys Lys Ile Lys Asn Lys Asn Lys Asn Lys Asn Lys Lys Lys Asn  
 515 520 525  
 Lys Leu Asn Asn Tyr Asn Asp Asn Phe Val Ser Val Asn Gly Ser Tyr  
 530 535 540  
 Asp Asn Tyr Ser Ile Asp Asn Asn Val Ile Asn Asp Glu Ile Arg Glu  
 545 550 555 560  
 Lys Lys Lys Asn Asn Lys Glu Val Lys Ile Met Val Asp Lys Asn Asn  
 565 570 575  
 Asp Thr Glu Lys Asp Gly Asn Lys Lys Tyr Asp Thr Ser Tyr Ser Phe  
 580 585 590  
 Asn Ile Lys Asn Thr Leu Ser Lys Val Phe Tyr Lys Asn Tyr Val Lys  
 595 600 605  
 Arg Lys Gly Met Ile Lys Gln Gln His Asn Asn Ile His Asn Thr His  
 610 615 620  
 Asn Ile His Asn Thr His Asn Met His Asn Thr His Asn Ile His Asn  
 625 630 635 640  
 Glu Lys Val Val Leu Leu Asp Asp Thr Lys Glu Lys Ala Asp Pro Met  
 645 650 655  
 Asn Leu Gly Ile Ser Phe Ser Pro Ala Gly Leu Leu Ile Pro Tyr His  
 660 665 670

Leu Gly Val Ser Ser Leu Leu Ile Glu Lys Asn Ile Leu Asn Met His  
 675 680 685  
 Thr Ser Ile Ala Gly Ser Ser Ala Gly Ser Ile Cys Ala Cys Cys Leu  
 690 695 700  
 Ser Val Gly Leu Ser Val Asn Lys Cys Tyr Phe Leu Ile Glu Asn Ile  
 705 710 715 720  
 Ile Ser Asn Val Tyr Lys His Gly Cys Tyr Gln Lys Leu Glu Asn Ile  
 725 730 735  
 Leu Asn Ile Glu Leu Asn Lys Tyr Leu Tyr Glu Asp Ser Tyr Ile Tyr  
 740 745 750  
 Leu Asn Asn Arg Ile Gly Asn Val Phe Val Gly Ile Thr Gln Ile Leu  
 755 760 765  
 Pro Tyr Tyr Lys Lys Leu Asn Ile Asn Asn Phe Tyr Asp Asp Asn Asp  
 770 775 780  
 Leu Ile Ser Ala Ile Ile Ala Ser Cys Asn Ile Pro Met Tyr Leu Ser  
 785 790 795 800  
 Ser Asn Ile Phe Val Asn Phe Arg Asn Lys Lys Cys Ile Asp Gly Phe  
 805 810 815  
 Phe Ser Thr Lys Lys Lys Asp Phe Gly Cys Pro Asn Thr Arg Thr Glu  
 820 825 830  
 Arg Ile Ile Lys Val Ser Pro Phe Asp Ser Asp Tyr Val Gly Ile Gly  
 835 840 845  
 Asn Lys Asn Asn Ser Val Ile Ser Pro His Leu Ile Lys Tyr Asn His  
 850 855 860  
 Ile Leu Phe Leu Phe Ile Cys Val Lys Asn Ile Phe His Lys Tyr Ile  
 865 870 875 880  
 Asn Asn Leu Trp Ile Glu Lys Asp Tyr Leu Phe Leu Ile Glu Asn Leu  
 885 890 895  
 Lys Asp Ile Leu Glu Arg Lys Ile Phe Asp Tyr Tyr Thr Phe Val Lys  
 900 905 910  
 Arg Tyr Phe Thr Phe Leu Arg Lys Asn Glu Thr Ile Asp Asp Lys Tyr  
 915 920 925  
 Glu Glu Glu Glu Tyr Glu Asp Glu Gly Glu Glu Tyr Glu Glu Glu Asp  
 930 935 940  
 Asp Asp Glu Glu Glu Asp Glu Glu Glu Tyr Gly His Asn Asn Asp Asn  
 945 950 955 960  
 Gln Asp Asp Glu Gly Asp Lys Asn Lys Thr Thr Asn Glu Lys Asn Lys  
 965 970 975  
 Lys Lys Lys Asn Lys Asn Asn Asn Asn Asn Asn Ile Phe Asn Asn  
 980 985 990  
 Asn Ile Phe Asn Asn Asn Ile Phe Asn Asn Asn Met Asn Ser Cys Val  
 995 1000 1005  
 Gly Val Ser Glu Lys Asp Phe Ile Ser Thr Ser Ile Val Ala Ser Phe  
 1010 1015 1020  
 Ala Asn Ile Lys Arg Gln Met Asn Glu Lys Ile Glu Lys Arg Lys Asn  
 1025 1030 1035 1040  
 Leu Lys Lys Glu Lys Lys Glu Lys Leu Gln Arg Lys Asn Met Asn Lys

1045	1050	1055
Cys Ser Lys Asn Arg Asn Arg Asn Arg Tyr Ile Asn Lys Asp Ser Asn		
1060	1065	1070
Ile His Leu Met Asn Leu Ile Arg Ile Lys Phe Lys Asn Leu Asn Tyr		
1075	1080	1085
Met Asn Met Asn Ser Phe Glu Ile Glu Leu Tyr Leu Lys Ile Asn Asn		
1090	1095	1100
Asp Ile Phe Leu Gln Phe Asn Lys His Asn Tyr Asn Val Gln Asn Phe		
1105	1110	1115
Tyr Asn Phe Ser Ile Thr Leu Ile Asn Ile Met Ser Lys Tyr Tyr Ser		
1125	1130	1135
Glu Asn Phe Tyr Ala Tyr Asn Leu Glu Lys Ile Val Tyr Lys Phe Leu		
1140	1145	1150
Leu Asn Asn Lys Asn Phe Glu Tyr Ile Glu Lys Gln Tyr Ser Ser Lys		
1155	1160	1165
Glu Asp Met Asn Glu Leu Asp Ile Leu Val Asn Thr Tyr Asp Met Lys		
1170	1175	1180
Tyr Asp Lys Ile Ile Glu Phe Leu Lys Asn Asn Gly Tyr Leu Lys Ile		
1185	1190	1195
Asp Arg Tyr Ile Tyr Phe Tyr Pro Lys Leu Lys Thr Asp Ile Ile Leu		
1205	1210	1215
Phe Phe Phe Lys Glu Ile Phe Leu Asn Asp Asn Ile Leu Lys Ile Asp		
1220	1225	1230
Arg Lys Phe Leu Lys Lys Asn Ile Thr Ile Met Ile Glu Val Leu Lys		
1235	1240	1245
Glu Ile Phe Phe Lys Glu Tyr Val Lys Arg Cys Ile Thr Lys Val Ile		
1250	1255	1260
Phe Phe Pro Val His Met Lys Glu His Asp His Val Met Asn Lys Asn		
1265	1270	1275
Tyr Tyr Asn Asn Gln Tyr Val Asn Asn Ser Asn Met Phe Asn Thr Arg		
1285	1290	1295
Gly Asp His Asn Asn Asn Asn Gln Thr Asn Asp Asn His Tyr Asn His		
1300	1305	1310
His Tyr Asp Asp Thr His Asn Asn Asn Asn Asn Asn Ser Lys Tyr		
1315	1320	1325
Tyr Lys Asn Lys Asn Lys Asn Lys Ile Met Tyr Glu Lys Glu Arg Lys		
1330	1335	1340
Ser Ser Ser Leu Phe Ile Ser Asn Asn Val Gln Asp Val Lys Pro Ile		
1345	1350	1355
Lys His Tyr Leu Lys Tyr Ser Ser Ile Tyr Lys Asn Phe Ile Tyr Ile		
1365	1370	1375
Ile Ser Glu Ile Lys Asn Phe Asn Asn Lys Ile Thr Lys Ile Asn Arg		
1380	1385	1390
Tyr Asn Tyr Tyr Asn Tyr Met Asn Leu Asn Ile Asp Asp Leu Asn Asp		
1395	1400	1405
Ala Tyr Leu Phe Leu Tyr Val Tyr Leu Tyr Ser Asn Val Tyr Tyr Lys		
1410	1415	1420

Ser Phe Phe Ser Leu Met Asn Met Gln Tyr Arg Asp Tyr Leu Leu Arg  
 1425 1430 1435 1440  
 Ala Arg Arg Leu Ser Arg Glu Glu Asn Lys Ile Ser Pro Lys Asp Asp  
 1445 1450 1455  
 Ser Thr Gly Lys Asn Asn Thr Thr Asn Asn Asn Ile Ser Asn Asn Asn  
 1460 1465 1470  
 Asn Ile Ser Asn Asn Ile Asn Asn Asn Asn Asn Ile Asn Asn Ile Cys  
 1475 1480 1485  
 Ser Arg Asp Asn Lys Gly Asn Pro Thr Asn Tyr Asn Asn Ile Ser Gly  
 1490 1495 1500  
 Lys Glu Lys Asn Arg Asn Ile Phe Arg Lys Trp Asn Ser Lys Asp Leu  
 1505 1510 1515 1520  
 Lys Thr Asn Ser Asn Asn Tyr Ile Ala Thr Asn Lys Leu Ser Lys Thr  
 1525 1530 1535  
 Phe Ser Gly Ile Trp Leu Asp Lys Lys Lys Lys Lys Asn Asp Lys Thr  
 1540 1545 1550  
 Ile Glu Arg Asn Glu Ser Ala Glu Asn Lys Ile Glu Lys Asn Ile Ile  
 1555 1560 1565  
 Glu Asn Asn Tyr Thr Ile Asp Asn Asp Lys Arg Glu Phe Asn Met Asp  
 1570 1575 1580  
 Asn Thr Ile Lys Asn Glu Lys Arg Glu Ser Glu Asn Asn Asn Lys His  
 1585 1590 1595 1600  
 Met Glu Cys Leu Gln Asn Asp Asn Asp Lys Asn Val Asn Asn Asn Phe  
 1605 1610 1615  
 Lys Phe Ile Glu Asn Asn Gly Thr Asn Glu Ile Lys Lys Glu Leu Tyr  
 1620 1625 1630  
 Arg Asn Asp Met Tyr Asn Asp Gly Ile Ile Asn Phe Asp Ile Asn Asn  
 1635 1640 1645  
 Glu Tyr Phe Phe Arg Asn Leu Asn Asn Met Asn Glu Cys Gln Phe Phe  
 1650 1655 1660  
 Lys Tyr Thr Leu Phe Asp Lys Asn Asp Asn Val Phe Asp His Ile Asn  
 1665 1670 1675 1680  
 Asn Lys Asp Asn Thr Asp Tyr Asn Lys Tyr Phe Tyr Lys Phe Glu Asn  
 1685 1690 1695  
 Leu Ile Ile Phe Asn Tyr Asp Phe Thr Leu Ile Ser Lys Ile Glu Asp  
 1700 1705 1710  
 Phe Tyr Gln Ser Asn Arg Tyr Lys Ile Phe Asp Ile Asn Lys Lys Lys  
 1715 1720 1725  
 Lys Lys Glu Ile Phe Tyr His Leu Tyr Tyr Ile Tyr Ile Tyr Tyr Arg  
 1730 1735 1740  
 Asp Ile Leu Phe Leu Leu Lys Phe Val Phe Thr Leu Asn Phe Cys Glu  
 1745 1750 1755 1760  
 Asn Thr Lys Tyr Lys Phe Leu Lys Arg Arg Glu Asn Thr Tyr Lys Lys  
 1765 1770 1775  
 Lys Tyr Lys Asp Met Arg Val Pro Tyr Ile Asn Leu His Met Glu Gln  
 1780 1785 1790

Gly Gly Asp Lys Lys Gly Asn His Glu Asn Ile Gln His Arg Lys Asn  
 1795 1800 1805

Asn Glu Val Asp Ile Val Tyr Asn Asn Arg Val Glu Asp Ile Arg Glu  
 1810 1815 1820

Asn Met Asn Glu Pro Ile Lys Asn Gly Tyr Ala Asp Thr Tyr Gly Asn  
 1825 1830 1835 1840

Ile Tyr Gly His Thr His Asn Asn Tyr His Asn Tyr His Asn Asn Asn  
 1845 1850 1855

Asn Asn Ile Asn Asn Asp Met Thr Leu Cys Ser Arg Ser Val Leu Gln  
 1860 1865 1870

Lys Ser Lys Gln Ile Ser Leu Leu Asn Asn Pro Thr Phe Ser Ser Asn  
 1875 1880 1885

Ile Asp Glu Thr Phe Met Asp Ser Ala Ser Asp Val Asn Asp Tyr Asp  
 1890 1895 1900

Ile Asp Asn Asn Lys Arg Val Gln Pro His Phe Tyr Asp Ile Cys Glu  
 1905 1910 1915 1920

His Ile Lys Lys Pro Pro Asn Asn Gly Val Asn Asn Ile Tyr Ser Asn  
 1925 1930 1935

Asn Asn Leu Tyr Gly Asp Asp Asn Met Asn Tyr Pro Thr Ser Ser Thr  
 1940 1945 1950

Gly Lys Gly Thr Pro Arg Arg Leu Phe Glu Gly Ser Asn Asn Asp Gly  
 1955 1960 1965

Asn Asn Ser Val Ile Leu Ser Lys Ser Glu Tyr Val Arg Lys Lys Arg  
 1970 1975 1980

Leu Arg Tyr Leu Glu Gly Asn Asp Ser Asp Phe Val Glu Asp Leu Lys  
 1985 1990 1995 2000

Thr Asn Ile Glu Asp Glu Leu Tyr Asp Lys Tyr Lys Thr Tyr Phe Val  
 2005 2010 2015

Lys Asn Val Tyr Ser Met Arg Lys Leu Phe Lys Ile Ala Leu Glu Gly  
 2020 2025 2030

Ser Glu Glu Lys Val Ile Lys Lys Ile Tyr Asp Leu Gly Arg Ser Asp  
 2035 2040 2045

Ala His Leu Trp Leu Phe Val Glu Tyr Leu Asn Val Gly Ile Tyr Leu  
 2050 2055 2060

Tyr Lys Arg Ile Tyr Thr Ile Tyr Ile Lys Leu Leu Thr Val Phe Glu  
 2065 2070 2075 2080

Ser Leu Ile Tyr Leu Thr Asn Ile Asn Lys Lys Lys Lys Lys Val Asp  
 2085 2090 2095

Ile Ser Thr Phe Leu Ala Ser Ile Glu Tyr Ala Val Ile Tyr Val Asn  
 2100 2105 2110

Gly Asn Pro Phe Asp Leu Phe Lys Phe Cys Asn Leu Leu Val Leu Cys  
 2115 2120 2125

Tyr Thr Tyr Tyr Ser Met Pro Tyr Val Lys Ala Gln Thr Ser Val Leu  
 2130 2135 2140

Asn Asn Asn Asp Asp His Lys Leu Gly Thr Val Tyr Asp Lys Asn Ile  
 2145 2150 2155 2160

Met Asn Lys Glu Ser Val His Ala Asn Gly Ile Ser Lys Glu Leu Ile



```
<210> 174
<211> 482
<212> PRT
<213> Plasmodium falciparum
```

373

374

<210> 175  
 <211> 426  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 175

```

Met Tyr Asp Lys Lys Tyr Asp Ile Leu Leu Leu Gly Cys Thr Gly Tyr
 1          5          10          15

Thr Gly Gln Met Val Leu Glu Tyr Phe Leu Glu Asn Tyr Glu Lys Lys
          20          25          30

Ile Lys Ser Glu Glu Ile Lys Leu Leu Cys Gly Val Arg Asn Ile Lys
          35          40          45

Lys Leu Asp Thr Phe Leu Tyr Thr Ile Lys Glu Lys Asn Asp Val Ile
          50          55          60

Leu Lys Lys Ile Asn Lys Lys Glu Ile Asp Ile Asn Ile Tyr Glu Ser
          65          70          75          80

Ile Leu Asn Cys Cys Lys Ile Ser Lys Val Val Ile Ser Thr Ile Gly
          85          90          95

Pro Tyr Ile Leu Tyr Gly Tyr Asn Ile Val Lys Ala Cys Val Glu Gly
          100          105          110

Gly Cys His Tyr Val Asp Val Cys Gly Glu His Asn Phe Ile Leu Asn
          115          120          125

Ile Tyr Lys Glu Phe Asn Asn Ile Ala Ile Glu Lys Lys Leu Lys Ile
          130          135          140

Ile His Ser Ala Ser Phe Ile Ser Ala Ile Ser Asp Ile Gly Asn Phe
          145          150          155          160

Ile Met Gln Glu Glu Phe Phe Arg Gln Tyr Lys Lys Thr Cys Pro Val
          165          170          175

Ile Lys Ile Arg Leu Cys Asn Glu Gly Asn Asn Leu Arg Thr Ile Gly
          180          185          190

Lys Thr Thr Ile Lys Ser Ala Leu Leu Phe Lys Lys Tyr Ile Lys Asn
          195          200          205

Asn Tyr His Lys Tyr Tyr Leu Cys Asp Asn Lys Tyr Asp Val Gln Tyr
          210          215          220

Lys Val Ser Gly Asn Asn Tyr Leu Lys Lys Pro Lys Glu Ile His Thr
          225          230          235          240

Asn Ser Phe Leu Asp Tyr Glu Lys Glu Phe Gly Tyr Cys Phe Asp Thr
          245          250          255

Ser Tyr Ser Asn Ile Glu Glu Ala Tyr Val Leu Trp Ser Asn Tyr Leu
          260          265          270

Leu Asn Tyr Lys Tyr Gly Lys Asp Leu Val Ile Asn Tyr Lys Gln Tyr
          275          280          285

Asp Thr His Leu Ser Thr Ser Met Tyr Ile Phe Lys Lys Val Cys Gly
          290          295          300

Lys Ile Phe Asn Phe Phe Gln Ser Phe Phe Phe Met Asp Tyr Leu Ile
          305          310          315          320

Asn Lys Tyr Ile Asp Leu Phe Tyr Lys Pro Lys Thr Met Asn Glu Leu
          325          330          335

```

Lys Lys Ala Tyr Trp Lys Cys Ile Ile Val Gly Glu Asp Asn Asp Asn  
 340 345 350  
 Asp Glu Glu Lys Lys Lys Lys Ser Ile Tyr Leu Tyr Leu Ser Gly Lys  
 355 360 365  
 Asn Glu Asp Pro Gly Tyr Leu Leu Ser Ala Lys Ile Ile Ser Glu Ser  
 370 375 380  
 Ala Ile Ser Leu Leu Lys Glu Asn Asp Leu Pro Lys Thr Phe Gly Val  
 385 390 395 400  
 Ile Ser Val Ser Val Gly Leu Gly Asn Val Leu Val Glu Arg Leu Lys  
 405 410 415  
 Lys Ala Ser Ile His Met Ser Ile Glu Lys  
 420 425

<210> 176  
 <211> 58  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 176  
 Met Gly Lys Val His Gly Ser Leu Ala Arg Ala Gly Lys Val Lys Asn  
 1 5 10 15  
 Gln Thr Pro Lys Val Pro Lys Leu Asp Lys Lys Lys Arg Leu Thr Gly  
 20 25 30  
 Arg Ala Lys Lys Arg Gln Leu Tyr Asn Arg Arg Phe Ser Asp Asn Gly  
 35 40 45  
 Gly Arg Lys Lys Gly Pro Asn Ser Lys Ala  
 50 55

<210> 177  
 <211> 338  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 177  
 Met Ile Cys Ser Asn Leu Ser Leu Leu Arg Tyr Val His Leu Val Tyr  
 1 5 10 15  
 Tyr Phe Ile Ile Ile Ser Phe Cys Ile His Asn Asn Ile Ser Cys Phe  
 20 25 30  
 Asn Val Asn Leu Thr Lys Thr Asn Glu Asp Ala Asn Ile Ile Arg Leu  
 35 40 45  
 Asn Lys Leu Ile Ser Met Lys Arg Asn Ile Ser Arg Arg Lys Ser Asp  
 50 55 60  
 Glu Phe Ile Lys Asp Gly Lys Val Lys Ile Asn Asn Lys Ile Ile Thr  
 65 70 75 80  
 Asn Pro Gly Thr His Val His Ile Gly Lys Asp Ser Leu Arg Ile Tyr  
 85 90 95  
 Asp Lys Lys Ile Lys Leu Thr Asn Ile Ile Asn Met Ile Lys Gln Asn  
 100 105 110  
 Glu Asn Lys Leu His Lys Trp Ile Val Leu His Lys Pro Lys Gly Leu  
 115 120 125  
 Leu Cys Thr Ser Asn Asp Glu Lys Asn Arg Lys Ser Ile Tyr Thr Leu

130					135					140					
Phe 145	Pro	Glu	Glu	Met	Leu 150	Gln	Lys	Tyr	Arg	Leu 155	Val	Thr	Val	Gly	Arg 160
Leu	Asp	Arg	Asn	Thr 165	Ser	Gly	Val	Leu	Leu 170	Leu	Thr	Asn	Asp	Tyr	Ala 175
Trp	Val	Asn	Lys 180	Leu	Thr	His	Pro	Lys 185	Tyr	Gln	Arg	Ile	Arg 190	Thr	Tyr
Arg	Val	His 195	Ile	Glu	Gly	Pro	Val 200	Lys	Met	Asn	Ala	Leu 205	Lys	Glu	Leu
Ala	Arg	Gly	Ile	Tyr	Leu	Glu 215	Glu	Asp	Glu	Lys	Thr 220	Gln	Pro	Lys	Lys
Ile 225	Tyr	Asn	Tyr	Lys	Glu 230	Ser	Arg	Glu	Lys	Ser 235	Asn	Ile	Asp	Asp	Lys 240
Lys	Lys	Lys	Lys	Met 245	Ser	Lys	Met	Lys	Lys 250	Lys	Thr	Asn	Pro	Ala	Phe 255
Ile	Glu	Ile	Leu 260	Arg	Glu	Glu	Lys	Ile 265	Lys	Ile	Lys	Glu	Asp 270	Thr	Lys
Lys	Ile	Thr 275	Val	Leu	Asn	Ile	Ser 280	Ile	Lys	Glu	Gly	Arg 285	Asn	Arg	Gln
Ile 290	Arg	Lys	Met	Phe	Gln	Gln 295	Ile	Asn	Gln	Pro	Val 300	Ile	Lys	Ile	Lys
Arg 305	Thr	Ser	Phe	Glu	Asn 310	Ile	Thr	Leu	Lys	Asn 315	Ile	Tyr	Phe	Pro	Lys 320
Gln	Tyr	Arg	Glu	Leu 325	Asn	Gln	Lys	Glu	Val 330	Asn	Asp	Leu	Lys	Leu 335	Arg
Asn Phe															

<210> 178  
 <211> 904  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 178  
 Met Ser Ser Lys Asp Lys Asn Leu Phe Ser Asp Asp Glu Ser Asp Asp  
 1 5 10 15  
 Gly Arg Lys Lys Lys Arg Leu Lys Lys Val Ser Ser Ser Leu Phe His  
 20 25 30  
 Asp Asp Asp Asp Asp Asn Phe Ile Ser Asn Lys Lys Val Glu Lys Ser  
 35 40 45  
 Lys Ser Lys Lys Lys Ser Asp Ala Ile Tyr Ile Asp Asp Asn Glu Ser  
 50 55 60  
 Asn Asn Asn Asn Asn Tyr Asn Asn Thr Asn Lys Ser Ser Asn Arg Lys  
 65 70 75 80  
 Ser Leu Glu Asn Lys Ser Ser Lys Thr Ser Pro Lys Phe Tyr Asp Ile  
 85 90 95  
 Thr Ser Phe Phe Lys Pro Ser Ser Lys Lys Leu Glu Asp Asn Asn Thr  
 100 105 110  
 Met Lys Lys Ser Asn Ser Lys Glu Asp Glu Lys Leu Val Val Asn Asn

115							120					125				
Leu	Asn	Asp	Tyr	Phe	Asn	Ile	Leu	Gln	Asn	Asp	Asn	Lys	Val	Thr	Lys	
130						135					140					
Glu	Asp	Thr	Lys	Ser	Asn	Asn	Val	Ser	Pro	Lys	Asn	Glu	Ile	Asn	Lys	
145					150					155					160	
Ser	Asn	Val	Lys	Arg	Glu	Arg	Glu	Ser	Glu	Gln	Tyr	Glu	Ile	Ser	Ser	
				165					170					175		
Glu	Asn	Asp	Thr	Val	Ser	Ser	Lys	Lys	Asn	Val	Leu	Ile	Ser	Pro	Ala	
			180					185					190			
Lys	Lys	Gln	Lys	Thr	Gln	Asn	Asn	Asn	Asn	Glu	Asp	Leu	Gln	Lys	Phe	
		195					200					205				
Asp	Tyr	Leu	Pro	Phe	His	Asn	Gln	Lys	Phe	Val	Ile	Thr	Gly	Val	Phe	
	210					215					220					
Lys	Asn	Phe	Thr	Arg	Asp	Glu	Leu	Gln	Ser	Lys	Ile	Lys	Glu	His	Gly	
225					230					235					240	
Gly	Ser	Val	Met	Thr	Ala	Val	Ser	Thr	Lys	Thr	Asn	Tyr	Leu	Val	His	
				245					250					255		
Gly	Glu	Tyr	Leu	Glu	Asp	Gly	Arg	Leu	Phe	Asn	Glu	Gly	Arg	Lys	Tyr	
			260					265					270			
Thr	Lys	Ala	Phe	Glu	Leu	Gln	Gln	Gln	Asn	Lys	Ser	Asn	Ile	Lys	Ile	
		275						280					285			
Leu	Asn	Glu	Glu	Glu	Leu	Leu	Lys	Leu	Leu	Pro	Gln	Thr	Asp	Gln	Thr	
	290					295					300					
Gln	Glu	Asn	Asp	Lys	Thr	Tyr	Ala	Ser	Asp	Thr	Ile	Lys	Thr	Glu	Asn	
305					310					315					320	
Lys	Asp	Lys	Asn	Tyr	Asn	Tyr	Glu	Lys	Lys	Asp	Lys	Asn	Tyr	Asn	Tyr	
				325					330					335		
Glu	Lys	Lys	Asp	Thr	His	Asn	Thr	Gln	Asn	Glu	Ile	Leu	Asn	Gln	Leu	
			340					345					350			
Trp	Val	Glu	Lys	Tyr	Arg	Pro	Lys	Asn	Leu	Asn	Glu	Leu	Val	Gly	Asn	
		355						360					365			
Asn	Gln	Asn	Val	Ile	Lys	Leu	Gln	Asn	Trp	Leu	Ala	Ser	Trp	Glu	Asp	
	370					375					380					
Val	Cys	Ile	Lys	Gly	Ile	Lys	Lys	Pro	Ala	Gln	Lys	Thr	Phe	Arg	Gly	
385					390					395					400	
Ile	Phe	Glu	Asn	Val	Asn	Ala	Arg	Cys	Ala	Leu	Leu	Ser	Gly	Pro	Ala	
				405					410					415		
Gly	Ile	Gly	Lys	Thr	Thr	Thr	Ala	Lys	Ile	Val	Ser	Glu	Ala	Ser	Gly	
			420					425					430			
Tyr	Asn	Val	Ile	Glu	Phe	Asn	Ala	Ser	Asp	Glu	Arg	Asn	Lys	Ala	Ala	
		435						440					445			
Val	Glu	Lys	Ile	Ser	Glu	Met	Ala	Thr	Gly	Gly	Tyr	Ser	Ile	Met	Ser	
	450					455					460					
Leu	Asn	Asn	Arg	Lys	Leu	Thr	Lys	Thr	Cys	Ile	Ile	Met	Asp	Glu	Val	
465					470					475					480	
Asp	Gly	Met	Ser	Ser	Gly	Asp	Lys	Gly	Gly	Ser	Thr	Ala	Ile	Leu	Lys	
				485					490					495		

Leu Ile Glu Lys Thr Lys Cys Pro Ile Ile Cys Ile Cys Asn Asp Arg  
 500 505 510  
 Gln Asn Asn Lys Met Arg Thr Leu Ala Asn Lys Cys Tyr Asp Leu Lys  
 515 520 525  
 Phe Ser Met Pro Gln Lys Asn Ser Val Val Lys Arg Leu Leu Glu Ile  
 530 535 540  
 Cys Lys Lys Glu Gly Ile Met Met Glu Pro Asn Ala Leu Glu Leu Leu  
 545 550 555 560  
 Trp Glu Ser Thr Cys Gly Asp Ile Arg Gln Met Leu Asn Thr Leu Gln  
 565 570 575  
 Leu Leu Ser Lys Thr Tyr Thr Arg Ile Gln Phe Leu Asp Leu Lys Lys  
 580 585 590  
 Glu Leu Asn Asn Ser Asn Lys Asn Ile Gln Ser Leu Ala Asn Pro Phe  
 595 600 605  
 Glu Ile Thr Leu Lys Leu Leu Asn Phe Asn Glu Ser Ser Lys Leu Asn  
 610 615 620  
 Ile Arg Glu Ile Met Asp Leu Phe Phe Val Asp Tyr Glu Leu Ile Pro  
 625 630 635 640  
 Tyr Phe Ile Ser Glu Asn Tyr Thr Asn Val Phe Asn Glu Thr Asp Lys  
 645 650 655  
 Ser Ser Ala Ser Leu Asn Lys Trp Asn Val Phe Ser Gln Ile Ala His  
 660 665 670  
 Asp Leu Ser Leu Ala Asp Lys Ile Lys Tyr Asn Met Lys Ser Asn Met  
 675 680 685  
 Asp Phe Ala Leu Leu Pro His Phe Ala Ile Leu Ser Cys Val Cys Pro  
 690 695 700  
 Val Met Arg Ile Lys Ile Leu Lys Ser Phe Met Ser Gly Arg Val Asn  
 705 710 715 720  
 Phe Pro Thr Ala Phe Gly Lys Ile Ser Thr Phe Asn Lys Asn Lys Arg  
 725 730 735  
 Leu Leu Asn Glu Leu Cys Phe Asn Leu Ser Tyr Lys Leu Asn Val Cys  
 740 745 750  
 Pro Lys Tyr Met Val Thr Ser Gly Phe Leu Asn Tyr Ile Tyr Phe Lys  
 755 760 765  
 Ile Met Thr Pro Leu His Lys Ala Asp Val Asn Gln Ala Ile Gln Ile  
 770 775 780  
 Met Glu Glu Tyr Ser Ile Thr Arg Glu Met Val Thr Glu Asn Leu Pro  
 785 790 795 800  
 Cys Leu Arg Leu Pro Asn Gln Glu Asn Leu Tyr Asp Lys Leu Asp Thr  
 805 810 815  
 Lys Leu Lys Ser Ser Phe Thr Arg Leu Tyr Asn Ser Ser His Val Ile  
 820 825 830  
 Lys Ile Asp Pro Asn Ser Met Lys Lys Gly Leu Lys Ser Ser Glu Lys  
 835 840 845  
 Lys Thr Thr Phe Lys Leu Asn Glu Phe Glu Ser Asp Glu Asp Ile Asp  
 850 855 860

Glu Leu Ser Glu Ser Lys Glu Asp Lys Asp Asp Asp Val Leu Ile Lys  
 865 870 875 880  
 Thr Lys Ile Asp Arg Lys Gly Thr Leu Lys Thr Lys Pro Ser Thr Lys  
 885 890 895  
 Val Lys Ser Met Lys Lys Ala Lys  
 900

<210> 179  
 <211> 224  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 179  
 Met Ser Glu Arg Leu Gln His His His Val Lys Asn Ile Thr Ser Gln  
 1 5 10 15  
 Pro Leu Ser Ser Asp Leu Asn Asp Tyr Ser Thr Glu Asp Glu Glu Val  
 20 25 30  
 Met Asn Ile Leu Ser Asn Asn Met Thr His Asn Asn Asn Leu Thr Ser  
 35 40 45  
 Asn Asn Ser Asn Val Asn Gln Val Glu Asn Arg Thr Asn Gly Glu His  
 50 55 60  
 Arg Asn Val Leu Ile Asn Asn Met Asp Asp Thr Asp Glu Met Asn Lys  
 65 70 75 80  
 Ile Asn Glu Glu Gln Tyr Asp Arg Leu Ser Asp Glu Glu Ile Asn Asp  
 85 90 95  
 Lys Leu Asp Asn Leu Asp Glu Ser Val Ser Lys Lys Asp Met Tyr Ile  
 100 105 110  
 Ile Trp Phe Asn Phe Ser Asn Asn Cys Arg Lys Lys Tyr Tyr Asn Met  
 115 120 125  
 Ile Asp Asn Val Trp Thr Arg Phe Glu Ser Leu Cys Ser Tyr His Asn  
 130 135 140  
 Ile Pro Lys Lys Ile Leu Phe Lys Leu Trp Asn Lys Ala Tyr Asn Asp  
 145 150 155 160  
 Leu Ile Cys Thr Leu His Asn Lys Asp Tyr Ile Ser Met Lys Gln Phe  
 165 170 175  
 Tyr Glu Leu Phe Asp Lys Asn Glu Cys Ser Arg Asn Asn Tyr Ile Gln  
 180 185 190  
 Phe Ile Asp Ile Leu Gly Glu Ser Trp Tyr Asn Leu Thr Lys Lys Met  
 195 200 205  
 Glu Asn Lys Trp Asn Thr Ile Leu Gln Gly Asn Ile Ile Lys Gly Thr  
 210 215 220

<210> 180  
 <211> 285  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 180  
 Met Asn Asn Tyr Ile Asn Met Asn Asn Ser Gln Ala Leu Met Lys Arg  
 1 5 10 15



Thr His Lys Arg Asn Leu Ala Gln Lys Phe Lys Lys Leu Ile Gln Lys  
 20 25 30  
 Lys Ile Leu Gly Lys Phe Phe Ser Ser Arg Lys Asn Glu Lys Gly Val  
 35 40 45  
 Pro Arg Glu Asn Val Asp Ser Thr Thr Thr Ser Tyr Asn Ser Gly Tyr  
 50 55 60  
 Leu Ser Tyr Lys Glu Lys Lys Ile Gly Ser Gln Ser Arg Asn Lys Arg  
 65 70 75 80  
 Ile Asn Ser Lys Asn Asn Asn Asp Ser Asn Lys Asn Lys Lys Asn Asp  
 85 90 95  
 Tyr Gln Ile Val Gly Ile Lys Gln Asn Lys Gly Lys Lys Tyr Asn Lys  
 100 105 110  
 Lys Gly Asn Asn Ile Asn Gly Lys Lys Lys Lys Tyr Thr Ile Lys Leu  
 115 120 125  
 Phe Leu Lys Asn Ile Asp Asp Glu Lys Met Glu Tyr Ile Lys Asn Leu  
 130 135 140  
 Thr Asp Glu Lys Ile Asp Ile Met Ile Gln Arg Ile His Lys Asp Ile  
 145 150 155 160  
 Thr Lys Asp Lys Leu Phe Ser Ile Trp Ile Asn Val Arg Tyr Asn Tyr  
 165 170 175  
 Val Arg Lys Tyr Val Asp Met Met Asn Glu Leu Trp Ser Tyr Val Lys  
 180 185 190  
 Glu Glu Ser Asp Lys Asn Asn Phe Ser Asp Ile Ala Phe Asn Lys Ile  
 195 200 205  
 Trp Trp Lys Leu Tyr Pro Glu Leu Ile Ser Glu Phe Arg Glu Lys Asp  
 210 215 220  
 Asn Asn Asn Tyr Asn Asp Phe Phe Ser Ile Phe Asn Lys Glu Thr Cys  
 225 230 235 240  
 Asp Pro Asp Ile Tyr Ile Asn Phe Ile Asn Thr Thr Arg Lys Asn Trp  
 245 250 255  
 Asn Glu Ile Ile Cys Val Met Arg Tyr Lys Trp Ile Thr Ile Ile Pro  
 260 265 270  
 Phe Asn Phe Pro Pro Arg Lys Tyr Lys Tyr Ile His Val  
 275 280 285

&lt;210&gt; 181

&lt;211&gt; 230

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 181

Met Asn Lys Lys Asn Tyr Cys Ile Asn Pro Asn Asn Leu Asn Arg Ile  
 1 5 10 15

Lys Ser Asn Glu Tyr Asn Lys Asn Val Pro Ser Asn Ile Leu Asp Val  
 20 25 30

Asn Met Lys Asn Met Lys Lys Ser Thr Asn Ala Ile Asp Lys Leu Phe  
 35 40 45

Leu Phe Ile Lys Lys Ala Phe Met Phe Gly Leu Ile Ile Cys Val Phe  
 50 55 60

Gln Tyr Ser Phe Phe Asn Ser Thr Phe Ser Thr Asn Asp Asn Lys Asn  
 65 70 75 80  
 Leu Glu Arg Ile Asn Glu Tyr Ile Ile Ser Arg Asn Leu Ile Glu Asp  
 85 90 95  
 Ser Glu Leu Leu Asn Lys Ser Cys Val Gln Val Lys Glu Asn Ile Val  
 100 105 110  
 Asp Lys Ile Glu Asn Ile Tyr Glu Ser Lys Arg Asn Asp Phe Ile Ser  
 115 120 125  
 Lys Val Thr Glu Phe Phe Lys Lys Ile Ser Asn Tyr Ile Glu Lys Glu  
 130 135 140  
 Ile Arg Gln Val Leu Thr Tyr Phe Lys Glu Gly Lys Lys Asp Thr Val  
 145 150 155 160  
 Lys Ser Gly Val Thr Phe Phe Asn Arg Ile Ile Gly Phe Phe Lys Gly  
 165 170 175  
 Leu Lys Ile Phe Ser Met Pro Ile Leu Thr Thr Val Ser Ala Ile Leu  
 180 185 190  
 Leu Phe Lys Phe Lys Tyr Gln Leu Ala Ser Ile Leu Phe Gly Phe Leu  
 195 200 205  
 Pro Leu Leu Ser Cys Met Phe Ile Met Tyr Lys Ile Ile Lys Val Asn  
 210 215 220  
 Ser Glu Met Ser Lys Lys  
 225 230

&lt;210&gt; 182

&lt;211&gt; 1558

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 182

Met Thr Asn Ser Asn Tyr Lys Ser Asn Asn Lys Thr Tyr Asn Glu Asn  
 1 5 10 15  
 Asn Asn Glu Gln Ile Thr Thr Ile Phe Asn Arg Thr Asn Met Asn Pro  
 20 25 30  
 Ile Lys Lys Cys His Met Arg Glu Lys Ile Asn Lys Tyr Phe Phe Leu  
 35 40 45  
 Ile Lys Ile Leu Thr Cys Thr Ile Leu Ile Trp Ala Val Gln Tyr Ala  
 50 55 60  
 Asn Asn Ser Asp Ile Asn Lys Ser Trp Lys Lys Asn Thr Tyr Val Asp  
 65 70 75 80  
 Lys Lys Leu Asn Lys Leu Phe Asn Arg Ser Leu Gly Glu Ser Gln Val  
 85 90 95  
 Asn Gly Glu Leu Ala Ser Glu Glu Val Lys Glu Lys Ile Leu Asp Leu  
 100 105 110  
 Leu Glu Glu Gly Asn Thr Leu Thr Glu Ser Val Asp Asp Asn Lys Asn  
 115 120 125  
 Leu Glu Glu Ala Glu Asp Ile Lys Glu Asn Ile Leu Leu Ser Asn Ile  
 130 135 140  
 Glu Glu Pro Lys Glu Asn Ile Ile Asp Asn Leu Leu Asn Asn Ile Gly  
 145 150 155 160

Gln Asn Ser Glu Lys Gln Glu Ser Val Ser Glu Asn Val Gln Val Ser  
 165 170 175  
 Asp Glu Leu Phe Asn Glu Leu Leu Asn Ser Val Asp Val Asn Gly Glu  
 180 185 190  
 Val Lys Glu Asn Ile Leu Glu Glu Ser Gln Val Asn Asp Asp Ile Phe  
 195 200 205  
 Asn Ser Leu Val Lys Ser Val Gln Gln Glu Gln Gln His Asn Val Glu  
 210 215 220  
 Glu Lys Val Glu Glu Ser Val Glu Glu Asn Asp Glu Glu Ser Val Glu  
 225 230 235 240  
 Glu Asn Val Glu Glu Asn Val Glu Glu Asn Asp Asp Glu Ser Val Ala  
 245 250 255  
 Ser Ser Val Glu Glu Ser Ile Ala Ser Ser Val Asp Glu Ser Ile Asp  
 260 265 270  
 Ser Ser Ile Glu Glu Asn Val Ala Pro Thr Val Glu Glu Ile Val Ala  
 275 280 285  
 Pro Thr Val Glu Glu Ile Val Ala Pro Ser Val Val Glu Ser Val Ala  
 290 295 300  
 Pro Ser Val Glu Glu Ser Val Glu Glu Asn Val Glu Glu Ser Val Ala  
 305 310 315 320  
 Glu Asn Val Glu Glu Ser Val Ala Glu Asn Val Glu Glu Ser Val Ala  
 325 330 335  
 Glu Asn Val Glu Glu Ser Val Ala Glu Asn Val Glu Glu Ser Val Ala  
 340 345 350  
 Glu Asn Val Glu Glu Ser Val Ala Glu Asn Val Glu Glu Ile Val Ala  
 355 360 365  
 Pro Thr Val Glu Glu Ser Val Ala Pro Thr Val Glu Glu Ile Val Ala  
 370 375 380  
 Pro Ser Val Glu Glu Ser Val Ala Pro Ser Val Glu Glu Ile Val Val  
 385 390 395 400  
 Pro Thr Val Glu Glu Ser Val Ala Glu Asn Val Glu Glu Ile Val Ala  
 405 410 415  
 Pro Ser Val Glu Glu Ile Val Ala Pro Ser Val Glu Glu Ile Val Ala  
 420 425 430  
 Pro Thr Val Glu Glu Ser Val Ala Pro Thr Val Glu Glu Ile Val Ala  
 435 440 445  
 Pro Ser Val Glu Glu Ser Val Ala Pro Ser Val Glu Glu Ile Val Val  
 450 455 460  
 Pro Thr Val Glu Glu Ser Val Ala Glu Asn Val Glu Glu Ser Val Ala  
 465 470 475 480  
 Glu Asn Val Glu Glu Ile Val Ala Pro Ser Val Glu Glu Ile Val Ala  
 485 490 495  
 Pro Ser Val Glu Glu Ile Val Ala Pro Ser Val Glu Glu Ile Val Ala  
 500 505 510  
 Pro Ser Val Glu Glu Ile Val Ala Pro Ser Val Glu Glu Ile Val Ala  
 515 520 525

Pro	Ser	Val	Glu	Glu	Ile	Val	Ala	Pro	Ser	Val	Glu	Glu	Ile	Val	Ala
	530					535					540				
Pro	Ser	Val	Glu	Glu	Ile	Val	Ala	Pro	Thr	Val	Glu	Glu	Ile	Val	Ala
	545				550					555					560
Pro	Thr	Val	Glu	Glu	Ile	Val	Ala	Pro	Ser	Val	Glu	Glu	Ile	Val	Ala
				565					570					575	
Pro	Thr	Val	Glu	Glu	Ser	Val	Ala	Glu	Asn	Val	Ala	Thr	Asn	Leu	Ser
			580					585					590		
Asp	Asn	Leu	Leu	Ser	Asn	Leu	Leu	Gly	Gly	Ile	Glu	Thr	Glu	Glu	Ile
		595					600					605			
Lys	Asp	Ser	Ile	Leu	Asn	Glu	Ile	Glu	Glu	Val	Lys	Glu	Asn	Val	Val
	610					615					620				
Thr	Thr	Ile	Leu	Glu	Asn	Val	Glu	Glu	Thr	Thr	Ala	Glu	Ser	Val	Thr
	625				630					635					640
Thr	Phe	Ser	Asn	Ile	Leu	Glu	Glu	Ile	Gln	Glu	Asn	Thr	Ile	Thr	Asn
				645					650					655	
Asp	Thr	Ile	Glu	Glu	Lys	Leu	Glu	Glu	Leu	His	Glu	Asn	Val	Leu	Ser
			660					665					670		
Ala	Ala	Leu	Glu	Asn	Thr	Gln	Ser	Glu	Glu	Glu	Lys	Lys	Glu	Val	Ile
		675					680					685			
Asp	Val	Ile	Glu	Glu	Val	Lys	Glu	Glu	Val	Ala	Thr	Thr	Leu	Ile	Glu
	690					695					700				
Thr	Val	Glu	Gln	Ala	Glu	Glu	Glu	Ser	Ala	Ser	Thr	Ile	Thr	Glu	Ile
	705				710					715					720
Phe	Glu	Asn	Leu	Glu	Glu	Asn	Ala	Val	Glu	Ser	Asn	Glu	Asn	Val	Ala
			725					730						735	
Glu	Asn	Leu	Glu	Lys	Leu	Asn	Glu	Thr	Val	Phe	Asn	Thr	Val	Leu	Asp
		740						745					750		
Lys	Val	Glu	Glu	Thr	Val	Glu	Ile	Ser	Gly	Glu	Ser	Leu	Glu	Asn	Asn
		755					760					765			
Glu	Met	Asp	Lys	Ala	Phe	Phe	Ser	Glu	Ile	Phe	Asp	Asn	Val	Lys	Gly
	770					775					780				
Ile	Gln	Glu	Asn	Leu	Leu	Thr	Gly	Met	Phe	Arg	Ser	Ile	Glu	Thr	Ser
	785				790					795					800
Ile	Val	Ile	Gln	Ser	Glu	Glu	Lys	Val	Asp	Leu	Asn	Glu	Asn	Val	Val
				805					810					815	
Ser	Ser	Ile	Leu	Asp	Asn	Ile	Glu	Asn	Met	Lys	Glu	Gly	Leu	Leu	Asn
			820					825					830		
Lys	Leu	Glu	Asn	Ile	Ser	Ser	Thr	Glu	Gly	Val	Gln	Glu	Thr	Val	Thr
		835					840					845			
Glu	His	Val	Glu	Gln	Asn	Val	Tyr	Val	Asp	Val	Asp	Val	Pro	Ala	Met
	850					855					860				
Lys	Asp	Gln	Phe	Leu	Gly	Ile	Leu	Asn	Glu	Ala	Gly	Gly	Leu	Lys	Glu
	865				870					875					880
Met	Phe	Phe	Asn	Leu	Glu	Asp	Val	Phe	Lys	Ser	Glu	Ser	Asp	Val	Ile
				885					890					895	
Thr	Val	Glu	Glu	Ile	Lys	Asp	Glu	Pro	Val	Gln	Lys	Glu	Val	Glu	Lys

900						905						910					
Glu	Thr	Val	Ser	Ile	Ile	Glu	Glu	Met	Glu	Glu	Asn	Ile	Val	Asp	Val		
		915					920					925					
Leu	Glu	Glu	Glu	Lys	Glu	Asp	Leu	Thr	Asp	Lys	Met	Ile	Asp	Ala	Val		
	930					935					940						
Glu	Glu	Ser	Ile	Glu	Ile	Ser	Ser	Asp	Ser	Lys	Glu	Glu	Thr	Glu	Ser		
945				950						955					960		
Ile	Lys	Asp	Lys	Glu	Lys	Asp	Val	Ser	Leu	Val	Val	Glu	Glu	Val	Gln		
				965					970					975			
Asp	Asn	Asp	Met	Asp	Glu	Ser	Val	Glu	Lys	Val	Leu	Glu	Leu	Lys	Asn		
			980					985					990				
Met	Glu	Glu	Glu	Leu	Met	Lys	Asp	Ala	Val	Glu	Ile	Asn	Asp	Ile	Thr		
		995					1000					1005					
Ser	Lys	Leu	Ile	Glu	Glu	Thr	Gln	Glu	Leu	Asn	Glu	Val	Glu	Ala	Asp		
	1010					1015					1020						
Leu	Ile	Lys	Asp	Met	Glu	Lys	Leu	Lys	Glu	Leu	Glu	Lys	Ala	Leu	Ser		
1025					1030					1035					1040		
Glu	Asp	Ser	Lys	Glu	Ile	Ile	Asp	Ala	Lys	Asp	Asp	Thr	Leu	Glu	Lys		
				1045				1050						1055			
Val	Ile	Glu	Glu	Glu	His	Asp	Ile	Thr	Thr	Thr	Leu	Asp	Glu	Val	Val		
		1060					1065						1070				
Glu	Leu	Lys	Asp	Val	Glu	Glu	Asp	Lys	Ile	Glu	Lys	Val	Ser	Asp	Leu		
	1075					1080						1085					
Lys	Asp	Leu	Glu	Glu	Asp	Ile	Leu	Lys	Glu	Val	Lys	Glu	Ile	Lys	Glu		
	1090				1095						1100						
Leu	Glu	Ser	Glu	Ile	Leu	Glu	Asp	Tyr	Lys	Glu	Leu	Lys	Thr	Ile	Glu		
1105				1110						1115				1120			
Thr	Asp	Ile	Leu	Glu	Glu	Lys	Lys	Glu	Ile	Glu	Lys	Asp	His	Phe	Glu		
			1125					1130					1135				
Lys	Phe	Glu	Glu	Glu	Ala	Glu	Glu	Ile	Lys	Asp	Leu	Glu	Ala	Asp	Ile		
		1140				1145						1150					
Leu	Lys	Glu	Val	Ser	Ser	Leu	Glu	Val	Glu	Glu	Glu	Lys	Lys	Leu	Glu		
	1155					1160						1165					
Glu	Val	His	Glu	Leu	Lys	Glu	Glu	Val	Glu	His	Ile	Ile	Ser	Gly	Asp		
	1170				1175					1180							
Ala	His	Ile	Lys	Gly	Leu	Glu	Glu	Asp	Asp	Leu	Glu	Glu	Val	Asp	Asp		
1185				1190					1195					1200			
Leu	Lys	Gly	Ser	Ile	Leu	Asp	Met	Leu	Lys	Gly	Asp	Met	Glu	Leu	Gly		
			1205					1210					1215				
Asp	Met	Asp	Lys	Glu	Ser	Leu	Glu	Asp	Val	Thr	Ala	Lys	Leu	Gly	Glu		
			1220				1225					1230					
Arg	Val	Glu	Ser	Leu	Lys	Asp	Val	Leu	Ser	Ser	Ala	Leu	Gly	Met	Asp		
	1235					1240						1245					
Glu	Glu	Gln	Met	Lys	Thr	Arg	Lys	Lys	Ala	Gln	Arg	Pro	Lys	Leu	Glu		
	1250				1255					1260							
Glu	Val	Leu	Leu	Lys	Glu	Glu	Val	Lys	Glu	Glu	Pro	Lys	Lys	Lys	Ile		
1265				1270					1275					1280			

Thr Lys Lys Lys Val Arg Phe Asp Ile Lys Asp Lys Glu Pro Lys Asp  
 1285 1290 1295  
 Glu Ile Val Glu Val Glu Met Lys Asp Glu Asp Ile Asp Glu Asp Ile  
 1300 1305 1310  
 Glu Glu Asp Val Glu Glu Asp Ile Glu Glu Asp Lys Val Glu Asp Ile  
 1315 1320 1325  
 Asp Glu Asp Ile Asp Glu Asp Ile Asp Glu Asp Ile Gly Glu Asp Lys  
 1330 1335 1340  
 Asp Glu Val Ile Asp Leu Ile Val Gln Lys Glu Lys Arg Ile Glu Lys  
 1345 1350 1355 1360  
 Val Lys Glu Lys Lys Lys Lys Leu Glu Lys Lys Val Glu Glu Gly Val  
 1365 1370 1375  
 Ser Gly Leu Lys Lys His Val Asp Glu Val Met Lys Tyr Val Gln Lys  
 1380 1385 1390  
 Ile Asp Lys Glu Val Asp Lys Glu Val Ser Lys Ala Leu Glu Ser Lys  
 1395 1400 1405  
 Asn Asp Val Thr Asn Val Leu Lys Gln Asn Gln Asp Phe Phe Ser Lys  
 1410 1415 1420  
 Val Lys Asn Phe Val Lys Lys Tyr Lys Val Phe Ala Ala Pro Phe Ile  
 1425 1430 1435 1440  
 Ser Ala Val Ala Ala Phe Ala Ser Tyr Val Val Gly Phe Phe Thr Phe  
 1445 1450 1455  
 Ser Leu Phe Ser Ser Cys Val Thr Ile Ala Ser Ser Thr Tyr Leu Leu  
 1460 1465 1470  
 Ser Lys Val Asp Lys Thr Ile Asn Lys Asn Lys Glu Arg Pro Phe Tyr  
 1475 1480 1485  
 Ser Phe Val Phe Asp Ile Phe Lys Asn Leu Lys His Tyr Leu Gln Gln  
 1490 1495 1500  
 Met Lys Glu Lys Phe Ser Lys Glu Lys Asn Asn Asn Val Ile Glu Val  
 1505 1510 1515 1520  
 Thr Asn Lys Ala Glu Lys Lys Gly Asn Val Gln Val Thr Asn Lys Thr  
 1525 1530 1535  
 Glu Lys Thr Thr Lys Val Asp Lys Asn Asn Lys Val Pro Lys Lys Ser  
 1540 1545 1550  
 Arg Thr Gln Lys Ser Lys  
 1555

<210> 183  
 <211> 1014  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 183  
 Met Lys Tyr Phe Lys Lys Phe Lys Tyr Phe Leu Pro Lys Tyr Ile Leu  
 1 5 10 15  
 Thr Asn Asp Asp Glu Asn Lys Asn Lys Tyr Ala Ser His Lys Ile Tyr  
 20 25 30  
 Asn Leu Asn Asn Lys Tyr Gly Asn Phe Leu Lys Leu Ile Ile Cys Leu  
 35 40 45

Pro Phe Ile Leu Ile Thr Val Leu Trp Ile Phe Leu Thr Ile Ser Ile  
 50 55 60  
 Phe Val Ser Gln Thr Lys Lys Arg Lys Lys Lys Lys Glu Gln Asn Lys  
 65 70 75 80  
 Ser Val Met Leu Ile Tyr Tyr Tyr Val Tyr Lys Ser Cys Ile Val Pro  
 85 90 95  
 Leu Asp Ser Ile Tyr Leu Arg Ser Leu Cys Glu Ser Val Arg Ser Lys  
 100 105 110  
 Asn Ser Asn Asp Thr Ile Lys Glu Pro Val Leu Lys Asn Lys Val Phe  
 115 120 125  
 Ser Leu Pro Asn Glu Lys Lys Leu Thr Lys Ser Glu Asp Ile Cys Asp  
 130 135 140  
 Asn Asn Val Asn Cys Ile Phe Lys Phe Asn Glu Lys Leu Ile Asn Asp  
 145 150 155 160  
 Leu Glu Lys Tyr Lys Val Ser Asn Glu Asn Asp Val Met Ala Tyr Val  
 165 170 175  
 Lys Ser Tyr Ser Val Tyr Asn Asn Asn Asn Asn Asn Lys Lys Asp Asp  
 180 185 190  
 Ile Leu Asp Thr Lys Ile His Asn Ile Gly Lys Asn Gly Glu Asp Ile  
 195 200 205  
 Ile Lys Thr Met Glu Ile Leu Trp Leu Glu Phe Met Glu Asn Glu Lys  
 210 215 220  
 Glu Lys Tyr Tyr Leu Leu Lys Gly Arg Leu Tyr Lys Tyr Asn Asn Lys  
 225 230 235 240  
 Phe Lys Met Glu Asn Lys Tyr Thr Asp Glu Tyr Phe Pro Arg Lys Lys  
 245 250 255  
 Trp Asn Asn Tyr Asn Asp Leu Ile Tyr Lys Gly Ser Lys Asp Leu Glu  
 260 265 270  
 Glu Lys Leu Asn Lys Met Phe Tyr Glu Trp Tyr Lys Gln Glu Asn Leu  
 275 280 285  
 Asn Leu Glu Glu Tyr Arg Arg Leu Thr Val Leu Cys Arg Thr Gly Trp  
 290 295 300  
 Lys Ala Leu Tyr Asn Tyr Val Glu Asn Ile Cys Lys Glu Ile Ile His  
 305 310 315 320  
 Ser Asp Leu Asp Ile Ile Lys Asn Lys Lys Gly Ser Asn Met Lys Lys  
 325 330 335  
 Gly Leu Tyr Asn Asn Glu Tyr Lys Asn Asn Gly Lys Asn Ile Pro Phe  
 340 345 350  
 Asn Thr Ser Ser Ser Ile Asp Asn Lys Lys Leu Tyr Asn Ser Phe Gly  
 355 360 365  
 Lys Phe Glu Asn Pro Met Cys Phe Asn Tyr Glu Asp Ser Leu Thr Thr  
 370 375 380  
 Ser Cys Tyr Ile Asp Glu Asn Lys Ser Asp Ser Ser Tyr Glu Thr Glu  
 385 390 395 400  
 Glu Asn Val Asn Tyr Asn Asn Lys Met Gly Lys Arg Lys Asn Leu Val  
 405 410 415

Glu Ser Gln Ile Val Gly Lys Ser Asn Asn Ile Glu Glu Gly Glu Asn  
 420 425 430  
 Val Glu Tyr Leu Lys Asn Asn Lys Lys Ile Gly Asp Asp Glu Met Leu  
 435 440 445  
 Gln Asp Tyr Glu Lys Glu Lys Leu Lys Lys Lys Lys Trp Thr Glu Lys  
 450 455 460  
 Glu Glu Gln Thr Lys Lys Val Asn Tyr Ser Glu Lys Val Asn His Ser  
 465 470 475 480  
 Glu Lys Val Asn His Ser Glu Lys Leu Asn His Ser Glu Lys Leu Asn  
 485 490 495  
 His Ser Glu Lys Leu Asn His Ser Glu Lys Val Asn His Ser Glu Lys  
 500 505 510  
 Val Asn His Ser Glu Lys Val Asn His Ser Glu Lys Val Asn His Ser  
 515 520 525  
 Glu Lys Val Asn His Ser Glu Lys Val Asn His Ser Glu Lys Leu Asn  
 530 535 540  
 His Pro Asn Arg Glu Lys His Ser Gln Lys Glu Lys His Thr Glu Lys  
 545 550 555 560  
 Asp Asp Lys Arg Asn Asn Phe Lys Lys Asn Asn Asp Val Leu Glu Ile  
 565 570 575  
 Met Asp Ile Ile Arg Tyr Asp Ser Ser Asp Glu Pro Glu Asn Ser Lys  
 580 585 590  
 Asn Ile Gly Lys Lys Lys Lys Lys Lys Lys Lys Asn Ile Phe Lys Asn  
 595 600 605  
 Phe Glu Asn Val Ala Asn Ser Arg Gly Ser Lys Asn Phe Lys Asn Val  
 610 615 620  
 Phe Ser Arg Asn Lys Tyr Thr Leu Glu Glu Glu Val Asn Ser Val Cys  
 625 630 635 640  
 Lys Asp Gly Phe Asn Lys Lys Lys Val Leu Ile Lys Val Asn Met Leu  
 645 650 655  
 Ser Asn Ser Asp Asp Asn Thr Ser Ile Ser Asp Asp Asn Ser Asp Thr  
 660 665 670  
 Cys Val Asp Arg Thr Tyr Tyr Asp Leu Leu Asn Val Glu Pro Asp Ala  
 675 680 685  
 Ser Phe Asp Glu Ile Lys His Ser Tyr Arg Lys Leu Ala Leu Gln Tyr  
 690 695 700  
 His Pro Asp Lys Asn Ile Asn Asp Pro Glu Ala Asn Glu Lys Phe Gln  
 705 710 715 720  
 Lys Ile Asn Glu Ala Tyr Gln Val Leu Ser Asp Glu Asn Arg Arg Lys  
 725 730 735  
 Met Tyr Asp Glu Gly Gly Met Lys Ala Thr Glu Asn Met Phe Phe Ile  
 740 745 750  
 Asp Ala Ala Thr Phe Phe Thr Met Ile Tyr Ser Ser Glu Lys Leu Asn  
 755 760 765  
 Lys Tyr Ile Gly Ile Leu Lys Ile Thr Thr Phe Val Gln Ile Leu Tyr  
 770 775 780  
 Glu Asn Lys Ile Ser Ala Asp Lys Leu Asp Asn Ser Lys Asp Leu Ile



785                      790                      795                      800

Gln Asn Val Leu Val Asn Asp Gln Ile Lys Arg Glu Val Glu Leu Ala  
805                      810                      815

Val Leu Leu Lys Glu Arg Leu Gln Pro Tyr Val Asp Gly Asp Glu Asn  
820                      825                      830

Trp Val Asp Asn Met Arg Lys Glu Ile Lys Gly Leu Leu Asp Ser Ser  
835                      840                      845

Phe Ser Glu Ser Ile Leu Tyr Ser Val Gly Trp Val Tyr Lys Asn Ile  
850                      855                      860

Ser Ser Arg Tyr Ile Lys Lys Met Asn Ser Ile Leu Gly Leu Lys Ala  
865                      870                      875                      880

Val Arg Gly His Met Gln Ala Tyr Leu Arg Cys Ala Glu Asn Ile Tyr  
885                      890                      895

Met Gly Lys Leu Ala Phe Asn Lys Ile Leu Gln Gly Phe Asn Leu Leu  
900                      905                      910

Ser Gly Leu Glu Gly Glu Glu Leu Ser Met Lys Leu Gly Asp Ile Ile  
915                      920                      925

Cys Asp Ala Leu Arg Leu Met Leu Trp Asp Ile Glu Ser Thr Val Lys  
930                      935                      940

Asp Val Ala Lys Arg Val Leu Arg Asp Lys Ala Val Arg Lys Lys Ile  
945                      950                      955                      960

Arg Leu Lys Arg Ala Glu Ala Met Leu Ile Leu Gly Asn Leu Met Leu  
965                      970                      975

Glu Ile Ser Gly Ile Ser Gly Ile Asp Phe Ile His Tyr Lys Val Asp  
980                      985                      990

Gly Met Lys Ile Ile Glu Ser Ala Leu Met Lys Ser Ile Gln Phe Ser  
995                      1000                      1005

Glu Asn Pro Glu Glu Asn  
1010

<210> 184  
<211> 657  
<212> PRT  
<213> Plasmodium falciparum

<400> 184  
Met Lys Lys Lys Cys Phe Ile Asn Leu Leu Ile Tyr Met Tyr Asn Met  
1                      5                      10                      15

Thr Leu Ile Cys Gly Ile Pro Tyr Met Phe Leu Met Val Val Cys Val  
20                      25                      30

Asn Lys Leu Tyr Ala Phe Phe Ala Tyr Thr Phe Asp Glu Arg His Gln  
35                      40                      45

Arg Asn Leu Tyr Thr Ala Glu Cys Leu Ile Lys Asn Lys Glu Ser Tyr  
50                      55                      60

Ser Leu Glu Lys Asn Asp Ser Ser Ser Ile Asp Asn Tyr Tyr Lys Ser  
65                      70                      75                      80

Ile Gln Asn Ala Pro Tyr Ile Asp Glu Asp Ile Val Asp Asn Tyr Lys  
85                      90                      95

Gly Glu Leu Lys Glu Leu Ile Lys Ile Asn Lys Asn Asp Ile Ser Asn

390

Asp Ser Asp Asp Phe Ile Ile Ile Asp Glu Lys Asp His Asn Asn Glu  
 485 490 495  
 Asn Ile Lys Asn Cys Thr Val Leu Phe Asn His Ile Arg Ser Asn Asn  
 500 510  
 Glu Asn Asn Ile Asn Leu Glu Asp Met Thr Arg Asn Val Leu Ile Leu  
 515 520 525  
 Ile Ile Leu Asp Ile Lys Leu Val Ile Lys Lys Ala Val Glu Arg Val  
 530 535 540  
 Leu Cys Asp Lys Gly Val Ser Gln Leu Thr Arg Lys Lys Arg Ala Lys  
 545 550 555 560  
 Gly Leu Met Ser Leu Gly Lys Glu Ile Gln Asn Tyr Thr Gln Lys Ile  
 565 570 575  
 Arg Asp Lys Asp Tyr Lys Ile Ile Asn Glu Asn Thr Asn Ile Leu Glu  
 580 585 590  
 Ser Ile Ile Glu Asp Ile Lys Lys Tyr Met Glu Ile Asp Lys Met Asn  
 595 600 605  
 Phe Leu Lys Glu Lys Gly Lys Lys Glu Ile Asp Lys Ile Phe Tyr Phe  
 610 615 620  
 Val Gly Asn Asn Ile Tyr Arg Asn Lys Leu Lys Arg Asn Ile Asn Glu  
 625 630 635 640  
 Lys Cys Arg Leu Leu Lys Phe Leu Lys Tyr Met Ile Asn Ser Thr Glu  
 645 650 655  
 Glu

<210> 185  
 <211> 225  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 185  
 Met Lys Ser Val Lys Met Gly Tyr Ser Asn Asn Lys Phe Asn Ile Phe  
 1 5 10 15  
 Thr Leu Trp Asn Asn Ile Ile Leu Tyr Phe Ile Leu Ile Val Thr Phe  
 20 25 30  
 Thr Phe Tyr Asn Lys Tyr Asn Gly Glu Lys Ser Asn Ile Gly Ala Ser  
 35 40 45  
 Phe Asn Phe Gly Asn Asn Arg Ser Leu Ala Glu Tyr Tyr Asn Asn Lys  
 50 55 60  
 Asp Gly Tyr Asn Val Leu Arg Val Asn Leu Asp His Lys Asn Leu Lys  
 65 70 75 80  
 Asp Val Leu Gly Asn Met His Pro Glu Ile Lys Met Val Glu Val Asp  
 85 90 95  
 Ser Glu Ser Val Cys Pro Gly Thr Asn Glu Val Asn Leu Lys Val Val  
 100 105 110  
 Thr Asn Ile Pro Pro Asp Met Ile Lys Val Asn Ala Thr Ser Glu Asn  
 115 120 125  
 Met Ser Val Gly Gln Trp Asp Tyr Ile Met Gln Tyr Tyr Gly Gln Ser  
 130 135 140

Thr Pro Lys Glu Val Ser Lys Leu Asp Ser Glu Val Lys Asp Lys Ile  
 145 150 155 160  
 Glu Lys Lys Ile Lys Lys Lys Lys Arg Lys Thr Pro Leu Ile Arg Tyr  
 165 170 175  
 Ile Ala Glu Leu Val Gly Tyr Gly Ile Ile Phe Ile Pro Gly Phe Pro  
 180 185 190  
 Val Leu Val Gly Ile Val Ser Val Gly Phe Cys Ile Leu Ile Phe Met  
 195 200 205  
 Gly Lys Lys Ser Ala Lys Asn Tyr Phe Ser Thr Ile Lys Lys Trp Leu  
 210 215 220  
 Phe  
 225

<210> 186  
 <211> 326  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 186  
 Met Val Ser Ser Val Lys Ser Ser Leu Phe Leu Leu Ile Phe Phe Leu  
 1 5 10 15  
 Tyr Leu Lys Lys Asn Val Ile Cys Ser Ile Asn Asp Asn Val Asn Glu  
 20 25 30  
 Asn Ile Thr Glu Gly Leu Asp Glu Tyr Glu Phe Gly Asn Glu Asn Ile  
 35 40 45  
 Asn Glu Ser Ile Thr Glu Asn Val Asn Val Asn Val Thr Glu Asn Glu  
 50 55 60  
 Lys Asp Asn Leu Ile Tyr Asn Asp Asp Asn Asn Asn Ile Glu Glu Leu  
 65 70 75 80  
 Lys Ser Met Ile Gly Asn Asp Glu Leu His Lys Asn Leu Ser Ile Leu  
 85 90 95  
 Glu Lys Leu Ile Leu Asp Ser Leu Lys Lys Asp Lys Leu Lys Leu Pro  
 100 105 110  
 Leu Ile Lys Glu Gly Thr Glu Glu Tyr Leu Asp Ile Ser Lys Phe Lys  
 115 120 125  
 Lys Lys Ile Leu Thr Asp Ser Asp Asp Lys Thr Tyr Ile Leu Pro Thr  
 130 135 140  
 Leu Glu Ser Ser Phe Tyr Asp Ile Thr Lys Tyr Glu His Ile Leu Lys  
 145 150 155 160  
 Glu Gln Leu Ile Glu Glu Tyr Asn Ser Lys Ile Ser Asp Ala Val Lys  
 165 170 175  
 Lys Lys Leu Leu Ile Val Arg Thr Leu Lys Thr Ile Lys Leu Met Leu  
 180 185 190  
 Ile Pro Leu Asn Ala Tyr Lys Glu Lys Asn Asp Leu Lys Ile Ala Leu  
 195 200 205  
 Glu Glu Leu Asn Asn Val Ile Thr His Arg Thr Tyr Glu Thr Leu Lys  
 210 215 220  
 Lys Ser Pro Ile Glu Asn Pro Gly Glu Phe Phe Arg Lys Leu Leu Thr  
 225 230 235 240

His Val Lys Glu Val Lys Glu Ser Lys Glu Ile Glu Asn Lys Gly Glu  
 245 250 255  
 Tyr Leu Ile Leu Gly Asn Asp Lys Ile Glu Ile Met Asp Ala His Asp  
 260 265 270  
 Phe Phe Phe Thr Thr Asn Ser Asn Ile Lys Phe Met Glu Thr Leu Asp  
 275 280 285  
 Ser Ile Ser Asn Gln Tyr Gly Leu Gly Leu Ile Asn Asp Leu Gly Pro  
 290 295 300  
 His Leu Ile Gly Glu Asn Lys Asn Met Ala Tyr Met Asn Ile Ser Ile  
 305 310 315 320  
 Tyr Ile Arg Ser Leu Leu  
 325

<210> 187  
 <211> 192  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 187  
 Met Val Leu Lys Leu Ala Leu Lys Asn Tyr Lys Asn Tyr Phe Glu Ala  
 1 5 10 15  
 Lys Asn Thr Lys Phe Phe Ser Trp Gln Lys Ile Leu Glu Phe Ser Leu  
 20 25 30  
 Thr Asp Arg Phe Lys Ile Leu Asp Met Met Cys Asp His Asp Val Val  
 35 40 45  
 Tyr Tyr Ser Gln Asp Lys Arg Arg Lys Thr Tyr Leu Asn Val Asp Thr  
 50 55 60  
 Ser Gly Ser Ser Met Glu Cys Asn Ile Leu Glu Phe Leu Ile His Tyr  
 65 70 75 80  
 Phe Asn Lys Tyr Gln Leu Glu Ile Ile Lys Ala Thr Gln Asp Thr Asp  
 85 90 95  
 Phe Glu Leu His Gly Met Met Glu His Lys Asn Ile Lys Asp Tyr Phe  
 100 105 110  
 Phe Ser Phe Met Cys Asn Asp Pro Lys Glu Cys Ile Ile Tyr His Thr  
 115 120 125  
 Asn Gln Phe Lys Lys Glu Ala Lys Glu Glu Asn Thr Phe Pro Glu Glu  
 130 135 140  
 Pro Asn Arg Glu Ile Ser Ala Tyr Asn Leu Tyr Leu Asn Tyr Tyr Tyr  
 145 150 155 160  
 Phe Met Lys Arg Tyr Ser Ser Tyr Gly Ile Lys Lys Thr Leu Tyr Val  
 165 170 175  
 His Leu Leu Asn Leu Thr Gly Leu Leu Ser Asn Asn Lys Asn Ile Tyr  
 180 185 190

<210> 188  
 <211> 740  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 188  
 Met Lys Ser Ser Thr Leu Glu Lys Met Lys Lys Ser Ile Asn Phe Leu  
 1 5 10 15  
 Val His Val Asn Ser Phe Leu Gln Leu Asp Phe Phe His Gln Leu Asn  
 20 25 30  
 Glu Pro Pro Val Gly Leu Pro Arg Ser Tyr Pro Leu Ser Leu Ile Leu  
 35 40 45  
 Glu His Lys Phe Lys Glu Trp Met Asn Ser Ser Pro Ala Gly Phe Tyr  
 50 55 60  
 Phe Ser Asn Tyr His Asn Pro Tyr Ile Arg Lys Glu Leu His Arg Lys  
 65 70 75 80  
 Val Leu Thr Glu Lys Phe Glu Pro Pro Lys Met Asn Lys Trp Asn Glu  
 85 90 95  
 Val Leu Lys Ser Leu Ile Glu Cys Ala Tyr Asp Met Tyr Phe Glu Gln  
 100 105 110  
 Arg His Val Lys Asn Leu Tyr Lys Asn His Asn Ile Tyr Asn Ile Asn  
 115 120 125  
 Asn Lys Ile Met Leu Met Arg Asp Ser Val Asp Leu Tyr Lys Lys Asn  
 130 135 140  
 Phe Lys Asp Val Ile Phe Phe Ala Asp Ile Phe Asn Leu Arg Lys Tyr  
 145 150 155 160  
 Leu Thr Ala Thr Pro Leu Ile Lys Lys Thr Trp Asp Arg Met Tyr Tyr  
 165 170 175  
 Phe Ile Tyr Arg Asn Thr Gly Asn Ser Val Asn Phe Tyr Lys Tyr Gly  
 180 185 190  
 Ile Ile Tyr Gly Phe Lys Ile Asn Lys Val Tyr Leu Lys Glu Val Val  
 195 200 205  
 Asp Glu Leu Tyr Ser Ile Tyr Asn Phe Asn Thr Asp Ile Phe Ser Asp  
 210 215 220  
 Thr Ser Phe Leu Gln Thr Val Tyr Leu Leu Phe Arg Lys Ile Glu Asp  
 225 230 235 240  
 Ser Tyr Arg Thr His Arg Arg Asn Asp His Ile Gly Val Asn Asn Ile  
 245 250 255  
 Phe Phe Met Asn Val Ala Asn Asn Tyr Ser Lys Leu Asn Asn Glu Glu  
 260 265 270  
 Arg Glu Met Glu Ile His Asn Ser Met Ala Ser Arg Tyr Tyr Ser Lys  
 275 280 285  
 Thr Met Phe Ala Ala Phe Gln Met Leu Phe Ser Thr Met Leu Ser Asn  
 290 295 300  
 Asp Ala Asn Asn Leu Asp Lys Val Tyr Gly Lys Ser Ser Asn Ile Gln  
 305 310 315 320  
 Val Ala Thr Ser Thr Thr Ala Phe Leu Thr Phe Ala Tyr Val Tyr Asn  
 325 330 335  
 Gly Ser Ile Met Asp Ser Leu Thr Asn Arg Leu Leu Pro Pro Tyr Ala  
 340 345 350  
 Lys Lys Pro Ile Thr Gln Leu Lys Tyr Gly Lys Thr Phe Val Phe Ser  
 355 360 365

Asn	Tyr	Phe	Met	Leu	Ala	Ser	Gln	Ile	Tyr	Glu	Met	Leu	Asn	Tyr	Lys	370	375	380	
Asn	Leu	Ser	Leu	Leu	Cys	Glu	Tyr	Gln	Ala	Val	Ala	Ser	Ala	Asn	Tyr	385	390	395	400
Tyr	Ser	Ala	Lys	Lys	Leu	Gly	Gln	Phe	Val	Gly	Arg	Lys	Tyr	Phe	Pro	405	410	415	
Leu	Thr	Thr	Tyr	Tyr	Leu	Ser	Leu	Arg	Ile	Arg	Ala	Ser	Tyr	Gly	Trp	420	425	430	
Val	His	Gly	Thr	Glu	Thr	Lys	Ile	Cys	Asn	Ser	Glu	Gly	Val	Ser	Cys	435	440	445	
Ser	Arg	Lys	Gly	Pro	Thr	Pro	Gly	Lys	Phe	Phe	Phe	Asn	Trp	Lys	Ser	450	455	460	
Asp	Ala	Pro	Ile	Tyr	Leu	Tyr	Phe	Tyr	Phe	Phe	Ser	Asn	Leu	Tyr	Leu	465	470	475	480
Asp	Ser	Ala	Lys	Tyr	Phe	Pro	Gly	Gly	Phe	Ser	Thr	Ser	Leu	Lys	Glu	485	490	495	
Gln	Thr	Glu	His	Val	Ser	Gln	Lys	Gly	Phe	Lys	Lys	Lys	Pro	Met	Val	500	505	510	
His	Glu	Leu	Thr	Lys	Asn	Leu	Ile	Leu	Asp	Val	Thr	Asn	Gly	Phe	Met	515	520	525	
Tyr	Ala	Phe	Cys	Phe	Tyr	Ser	Ile	Met	Pro	Leu	Tyr	Ala	Tyr	Phe	Glu	530	535	540	
Asn	Val	Asn	Phe	Tyr	Ile	Ile	Ser	Asn	Phe	Arg	Phe	Leu	Asp	Arg	Tyr	545	550	555	560
Tyr	Asn	Ala	Phe	Asn	Lys	Tyr	Phe	Ile	Asn	Phe	Phe	Lys	Thr	Lys	Leu	565	570	575	
Lys	Lys	Tyr	Thr	Thr	Asp	Val	Phe	Ile	Lys	Tyr	Glu	Tyr	Asp	Ala	Tyr	580	585	590	
Thr	Ser	Met	Lys	Lys	Tyr	Gly	Tyr	Leu	Asn	Glu	Val	Ile	Gly	Ser	Arg	595	600	605	
Leu	Ser	Ser	Lys	Asn	Arg	Ile	Val	Lys	Tyr	Ile	Tyr	Asp	Ser	Asn	Asp	610	615	620	
Asp	Ile	Met	Asn	Asn	Leu	Arg	Arg	Tyr	Asp	Met	Glu	Asn	Arg	Phe	Arg	625	630	635	640
Asn	Lys	Met	Ser	Thr	Tyr	Val	Asp	Glu	Tyr	Ala	Phe	Phe	Asp	Asp	Cys	645	650	655	
Gly	Lys	Asn	Glu	Val	Phe	Leu	Asn	Asp	Arg	Cys	Asp	Tyr	Cys	Pro	Ile	660	665	670	
Val	Glu	Asp	Leu	Cys	Glu	Pro	Asp	Thr	Lys	Glu	Tyr	Gln	Pro	His	Thr	675	680	685	
Ser	Asn	Ile	Gln	Lys	Val	Thr	Asp	Lys	Asn	Thr	Thr	Tyr	Ile	Asn	Tyr	690	695	700	
Glu	Lys	Leu	His	Glu	Glu	Ser	Tyr	Ser	Gln	Glu	Thr	Gln	Ser	Asp	Asn	705	710	715	720
Thr	Asp	Asp	Glu	Lys	Asp	Asn	Asp	Leu	Pro	Asp	Thr	Glu	Leu	Met	Ile	725	730	735	

Thr Arg Leu Gln  
740

<210> 189  
<211> 248  
<212> PRT  
<213> Plasmodium falciparum

<400> 189  
Met Pro Lys Asn Asp Thr Leu Tyr Asp Asn Phe Val Lys Tyr Asn Lys  
1 5 10 15  
Lys Ile Tyr Lys Lys Asn Leu Asn Asn Gly Lys Asp Asp Lys Lys Tyr  
20 25 30  
Ser Arg Asn Met Leu Asn Asn Lys Tyr Ser Glu Asp Leu Phe Glu Ser  
35 40 45  
Val Asn Met Val Glu Trp Cys Tyr Tyr Lys Asn Asp Met Ile Lys Glu  
50 55 60  
Arg Asn Val Ile Ser Glu Ser Asn Thr Val Trp Lys Lys Pro Ser Trp  
65 70 75 80  
Met Thr Arg Phe Lys Asn Lys Leu Tyr Lys Met Ile Phe Lys Lys Asn  
85 90 95  
Lys Phe Trp Lys Phe Ile Ser Gly Ile Ile Thr Val Leu Gly Asn Ser  
100 105 110  
Ala Ile Ile Cys Glu Ile Ile Met Leu Ile Gly Tyr Ile Ile Lys Tyr  
115 120 125  
Phe Met Cys Phe Cys Ser Cys Ala Tyr Ser Cys Leu Cys Ser Cys Ile  
130 135 140  
Cys Ser Cys Ser Ser Leu Cys Ser Cys Ile Cys Ser Cys Ile Cys Ser  
145 150 155 160  
Cys Ile Cys Ser Cys Ile Cys Thr Cys Thr Cys Ile Cys Ser Cys Leu  
165 170 175  
Cys Ser Cys Ile Cys Ser Cys Val Cys Ser Cys Val Cys Ser Ser Ala  
180 185 190  
Cys Thr Cys Ala Cys Val Tyr Thr Ser Val Ile Gly Ser Thr Leu Ile  
195 200 205  
Ala Val Ser Ala Gly Ile Leu Ala Ala Ile Ile Leu Leu Ile Ile Leu  
210 215 220  
Thr Ile Ile Ile Val Trp Leu Leu Val Thr Trp Leu Trp Ser His Lys  
225 230 235 240  
Asp Glu Tyr Tyr Lys Thr Ser Glu  
245

<210> 190  
<211> 307  
<212> PRT  
<213> Plasmodium falciparum

<400> 190  
Met Asn Ile Tyr Tyr Ile Asn Met Leu Val Met Ser Ile Leu Leu Ile  
1 5 10 15  
Val Leu Phe Leu Ser Tyr Asn Val Asn Asn His Asn Lys Lys Tyr Asn  
20 25 30



Val Gly Tyr Ile Gln Asn Asn Arg Gln Met Ile Met Met Lys Ser Arg  
 35 40 45  
 Arg Leu Ala Glu Ile Gln Leu Pro Lys Cys Pro His Tyr Asn Asn Asp  
 50 55 60  
 Pro Glu Leu Lys Lys Ile Ile Asp Lys Leu Asn Glu Glu Arg Ile Lys  
 65 70 75 80  
 Lys Tyr Ile Glu Thr Asn Asn Ser Phe Glu Glu Leu His Gly Leu Leu  
 85 90 95  
 Val Lys Glu Arg Thr Lys Ser Leu Tyr Glu Asn Gly Met Lys Lys Ser  
 100 105 110  
 Ser Asn Met Glu Lys Glu Leu Leu Lys Lys Tyr Asp Asp Ser Ile Arg  
 115 120 125  
 Asp Glu His Asn Val Ile Ser Lys Ser Gly Ile Tyr Thr Ser Asp Tyr  
 130 135 140  
 Arg Lys Leu Tyr Asp Lys Ser Cys Asp Tyr Gln Asn Gln Lys Ile Leu  
 145 150 155 160  
 Arg Asp Glu Leu Ala Ser Cys Cys Lys Val His Asp Asn Tyr Leu Asp  
 165 170 175  
 Asn Leu Lys Lys Gly Cys Phe Gly Gly Val Gly Ile Cys Thr Leu Cys  
 180 185 190  
 Ser Leu Leu Val Ser Asn Ile Gly Ile Gly Tyr Ala Val Thr Ala Ala  
 195 200 205  
 Lys Glu Val Ile Thr Gly Leu Tyr Ser Leu Asp Ile Ala Asn Lys Phe  
 210 215 220  
 Thr Lys Ala Leu Ala Gly Ile Tyr Phe Phe Phe Ser Ser Ser Ile Glu  
 225 230 235 240  
 Asn Ala Gly Val Ser Gly Val Thr Ile Phe Tyr Trp Asp Ser Met Arg  
 245 250 255  
 Met Ala Ser Ile Ala Ser Ser Thr Ile Asn Pro Tyr Gly Ile Ala Ala  
 260 265 270  
 Leu Val Leu Ile Val Leu Val Val Val Leu Ile Val Leu Tyr Ile Trp  
 275 280 285  
 Leu Tyr Arg Arg Arg Lys Lys Ser Trp Lys His Glu Cys Lys Lys His  
 290 295 300  
 Leu Ser Thr  
 305

<210> 191  
 <211> 109  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 191  
 Met Asn Leu Lys Lys Tyr Ser Lys Asn Glu Glu Cys Lys Glu Asn Met  
 1 5 10 15  
 Asp Asn Tyr Leu Met Tyr Leu Arg Met Gln Asp Asp Ile Lys Tyr Leu  
 20 25 30  
 Glu Arg Asn Asn Thr Trp Asn Asn Ile Trp Ile Val Thr Met Thr Leu  
 35 40 45

Phe Leu Ile Ile Ile Met Ile Ala Cys Ile Phe Ser Val Gly Ile Thr  
 50 55 60  
 His Ala Ser Ala Phe Tyr Pro Ala Leu Phe Leu Ala Val Phe Leu Ile  
 65 70 75 80  
 Tyr Met Tyr Ala Arg Phe Phe Pro Lys Ile Lys Ile Thr Phe Thr Glu  
 85 90 95  
 Leu Lys Lys Lys Leu Tyr Lys Phe Phe Gln Lys Lys Lys  
 100 105

<210> 192  
 <211> 136  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 192  
 Met Glu Asn Gln Met Gln Asp His Ile Asp Asp Ser Ile Asp Asn Pro  
 1 5 10 15  
 Met Asp Asp Ser Met Asn Asp Lys Leu Glu His Asn Asn Ser Leu Glu  
 20 25 30  
 Asp Ser Ile Lys Glu Tyr Tyr Thr Leu Thr Asn Pro Ser Val Asp Glu  
 35 40 45  
 Glu Asn Lys Ser Phe Phe Lys Lys Leu Lys Leu Ile Met Asn Ile Leu  
 50 55 60  
 Asp Asp Val His Ser Asp Leu Leu Val Asn Asn Asn Val Thr Asp Gly  
 65 70 75 80  
 Ser Ile Phe Ser Leu Glu Leu Val Pro Ile Ser Leu Leu Leu Thr Lys  
 85 90 95  
 Ala Leu Thr Cys Pro Leu Ile Gly Thr Val Thr Leu Ser Tyr Ile Thr  
 100 105 110  
 Ser Arg Ile Asn Phe Leu Asn Lys Tyr Glu Gly Glu Asn Ile Tyr Thr  
 115 120 125  
 Lys His Glu Ser Lys Ile Phe Lys  
 130 135

<210> 193  
 <211> 302  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 193  
 Met Gln Arg Lys Arg Tyr Asn Asn Phe Tyr Ile Lys Ala Glu Arg Asp  
 1 5 10 15  
 Phe Gln Asn Ser Leu Tyr Lys Leu Asn Asp Lys Asn Val Lys Ser Cys  
 20 25 30  
 Glu Phe Glu Asn Lys Met Lys Ser Ser Asp Lys Leu Ser Ser Ser Asn  
 35 40 45  
 Glu Ala Asp Glu Pro Asn Lys Met Gln Glu Pro Asn Ile Ile Glu Glu  
 50 55 60  
 Ser Asn Ile Ile Glu Glu Pro Asn Lys Ile Glu Glu Gln Asn Ile Ile  
 65 70 75 80  
 Glu Glu Ser Asn Lys Ile Glu Glu Ser Asn Lys Ile Glu Glu Pro Asn  
 398

										85						90						95
Ile	Ile	Glu	Glu	Ser	Asn	Glu	Ile	Glu	Glu	Ser	Asn	Lys	Ile	Glu	Glu							
			100					105					110									
Ser	Asn	Ile	Ile	Glu	Pro	Asn	Ile	Ile	Glu	Glu	Ser	Asn	Thr	Ile	Glu							
		115					120					125										
Glu	Ser	Asn	Lys	Ile	Glu	Glu	Ser	Asn	Ile	Ile	Glu	Pro	Asn	Ile	Ile							
	130					135					140											
Glu	Glu	Ser	Asn	Thr	Ile	Glu	Glu	Ser	Asn	Lys	Ile	Glu	Glu	Ser	Asn							
145					150					155					160							
Ile	Ile	Glu	Glu	Ser	Asn	Thr	Ile	Glu	Glu	Gln	Asn	Lys	Ile	Glu	Lys							
				165				170					175									
Val	Asn	Gln	Thr	Lys	Ser	Pro	Leu	Arg	Asn	His	Gln	Ile	Gln	Ile	Asn							
			180					185					190									
Asn	Thr	Ile	Asp	Lys	Ile	Ile	Gln	Asn	Ser	Asn	Gly	Asp	Glu	Lys	Leu							
		195					200					205										
Gln	Arg	Leu	Lys	Ser	Thr	Ser	Trp	Leu	Ile	Asn	Asn	Met	Glu	Ser	Ser							
	210					215					220											
Glu	Glu	Val	Lys	Gln	Arg	Leu	Arg	Gly	Leu	Ala	Gln	Ser	Tyr	Ile	Tyr							
225					230					235					240							
Asn	Pro	Asp	Glu	Ser	Lys	Lys	Arg	Lys	Ile	Ile	Lys	Glu	Ile	Tyr	Lys							
				245					250					255								
Tyr	Ser	Lys	Lys	Glu	Glu	Asn	Asn	Asp	Ile	Lys	Asn	Met	Phe	Leu	Lys							
			260					265					270									
Ile	Leu	Lys	Cys	Arg	Asp	Leu	Ser	Asn	Thr	Glu	Pro	Arg	Glu	Tyr	His							
		275					280					285										
Leu	Pro	Leu	Gln	Gly	Leu	Ser	Arg	Pro	Cys	Tyr	Leu	Phe	Val									
	290					295					300											

&lt;210&gt; 194

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 194

Asn	Asn	Leu	Ser	Asn	Asp	Val	Ser	Gly	Ile	Cys	Thr	Val	Met	Lys	Tyr					
1				5					10					15						
Ser	Phe	Ala	Asp	Leu	Arg	Asp	Ile	Ile	Lys	Gly	Thr	Asp	Leu	Trp	Asp					
			20					25					30							
Gln	Asn	Asn	Asp	Ala	Lys	Arg	Leu	Gln	Glu	Asn	Phe	Lys	Ile	Ile	Tyr					
		35					40					45								
Gly	Lys	Ile	Lys	Gly	Thr	Leu	Gly	Ala	Lys	Tyr	Ala	Arg	Asp	Asp	Pro					
	50					55					60									
Pro	Tyr	Thr	Asn	Leu	Arg	Gln	Asn	Trp	Trp	Glu	Ala	Met	Lys	Cys	Arg					
65					70					75					80					
Ile	Pro	Glu	Leu	Arg	Ala	Val	Pro	Asp	Lys	Gln	Gly	Tyr	Leu	Arg	His					
				85					90					95						
Lys	Leu	Glu	Cys	Ser																
			100																	

<210> 195  
 <211> 282  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 195  
 Met Ile Ile Ile Val Pro Phe Ile Phe Phe Asn Leu Ile Phe Thr Ser  
           1                          5                          10                          15  
 Asp Met Met Tyr Glu Tyr Ile Glu Asn Thr Lys Val Pro Ile Phe Val  
                           20                          25                          30  
 Lys Leu Phe Phe Gly Lys Ser Ile Phe Ile Glu Asp Ile Phe Tyr Tyr  
                           35                          40                          45  
 Val Gly Met Ile Met Lys Glu Met Met Glu Gly Gln Asn Ile Arg Glu  
           50                          55                          60  
 Glu Glu Val Ala Glu Leu Leu Lys Asp Arg Leu Asp Leu Tyr Ile Asp  
           65                          70                          75                          80  
 Asn Glu Asp Glu Trp Glu Lys Leu Met Glu Asn Glu Ile Ser Met Leu  
                           85                          90                          95  
 Leu Lys Ser Ser Phe Ser Asn Phe Ile Leu Glu Ser Ile Gly Trp Thr  
                           100                          105                          110  
 Tyr Glu Asn Val Ser Asn Ile Phe Leu Glu Glu Lys Ala Asn Ser Gly  
                           115                          120                          125  
 Ile Asn Lys Lys Asp Ile Tyr Leu Lys Glu Ala Asn Glu Arg Met Ile  
           130                          135                          140  
 Arg Asn Ser Ile Val Leu Arg Gln Cys Lys Ser Arg Phe Ile Ser Ile  
           145                          150                          155                          160  
 Ile Thr Asn Tyr Tyr Pro Phe Lys Glu Gln Asn Asn Pro Phe Ile Lys  
                           165                          170                          175  
 Gln Ala Gln Tyr Val Ser Ser Ser Asn Tyr Val Leu Asp Asp Ile Ile  
                           180                          185                          190  
 Asn Asn Ile Asp Tyr Ser Ile Asp Asn Ile His Arg Ala Ile Asp Asn  
                           195                          200                          205  
 Leu Tyr Tyr Glu His Ile Leu Asn Leu Leu Glu Glu Glu Lys Asn Glu  
           210                          215                          220  
 Ile Leu Glu Glu Ile Leu Arg Asn Ile Leu Lys Ile Ile Leu Cys Asp  
           225                          230                          235                          240  
 Val Glu Thr Thr Val Arg Arg Ser Ala Gln Lys Val Leu Gln Asn Ala  
                           245                          250                          255  
 Glu Gly Asp Thr Asn Leu Met Leu Lys Arg Ala Lys Gly Leu Gln Ser  
                           260                          265                          270  
 Leu Gly Lys Met Ile Leu Gln Lys Val Asn  
           275                          280

<210> 196  
 <211> 186  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 196  
 Met Leu Ala Gln Lys Asn Thr Asn Lys Lys Pro Phe Gly Asn Thr Leu  
           1                          5                          10                          15

Thr Asn Ile Leu Phe Lys Asp Lys Lys Lys Lys Asn Leu Asp Pro Gln  
 20 25 30  
 Ile Ser Ser Leu Val Ser Leu Val Asp Asn Met Asp Ile Thr Gln Glu  
 35 40 45  
 Lys Lys Asp Lys Ile Lys Asn Leu Ser Leu Lys Tyr Ile Asn Ser Arg  
 50 55 60  
 Asp Val Lys Glu Lys Asn Glu Ser Ile Asn Glu Leu Gln Lys Tyr Ser  
 65 70 75 80  
 Asn Asn Glu Glu Cys Lys Glu Tyr Met Asp Ser Tyr Leu Met His Leu  
 85 90 95  
 Arg Met Gln Asn Asp Ile Lys Cys Leu Lys Arg Lys Asn Leu Trp Asn  
 100 105 110  
 Asn Ile Trp Ile Val Ser Thr Thr Leu Leu Leu Ile Ile Ile Met Ile  
 115 120 125  
 Ala Cys Ile Ile Val Cys Thr Pro Glu Thr Tyr Thr Ala Leu Tyr Pro  
 130 135 140  
 Ala Phe Ile Leu Leu Ile Phe Ile Ile His Ile Val Ala Arg Tyr Phe  
 145 150 155 160  
 Pro Asp Met Lys Ile Gly Phe Lys Lys Leu Lys Thr Lys Leu Asn Thr  
 165 170 175  
 Phe Phe Gln Asn Lys Lys Gln Ile Thr Lys  
 180 185

&lt;210&gt; 197

&lt;211&gt; 230

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 197

Met Asn Tyr Phe Leu Ser Leu Phe Asn Val Ser Leu Phe Phe Leu Leu  
 1 5 10 15  
 Ile Phe Lys Tyr Ser Tyr Lys Asn Ile Val Lys Lys Asp Leu Gln Asp  
 20 25 30  
 Lys Phe Asn Lys Ser Ile Ile Thr Ile Asn Ile Ala Ser Arg Ile Leu  
 35 40 45  
 Thr Glu Asn Asn Lys Lys Trp Tyr Lys Lys Tyr Ile Tyr Thr Ser Ile  
 50 55 60  
 Phe Ser Gly Asn Lys Asn Pro Gln Lys Arg Glu Arg Lys Asn Glu Glu  
 65 70 75 80  
 Glu Asn Gln Lys Asp Asn Thr Lys Val Asp Asn Asp Asn Asn Met Glu  
 85 90 95  
 Asn Glu Met Glu Asn His Ile Asp Asp Ser Ile Asp Asp Pro Met Asp  
 100 105 110  
 Asp Leu Met Asn Asp Lys Trp Glu His His Asn Ser Leu Glu Asp Arg  
 115 120 125  
 Ile Lys Glu Tyr Tyr Thr Leu Thr Asp Pro Ser Asp Gly Glu Glu Asn  
 130 135 140  
 Asn Ser Phe Phe Lys Lys Leu Lys Leu Ile Met Asn Ile Leu Asp Glu  
 145 150 155 160

Val His Ser Asp Leu Leu Ile Asn Asn Ser Val Thr Asp Gly Ser Ile  
165 170 175

Phe Ser Pro Glu Leu Val Pro Ile Ser Val Leu Ser Thr Met Thr Leu  
180 185 190

Ala Cys Pro Pro Ile Gly Thr Val Thr Leu Pro Tyr Ile Thr Asn Arg  
195 200 205

Ile Asn Phe Leu Asn Arg Tyr Glu Gly Gln Asn Ile His Thr Glu His  
210 215 220

Asp Leu Lys Ile Phe Lys  
225 230

&lt;210&gt; 198

&lt;211&gt; 257

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 198

Met Val Glu Glu Pro Phe Glu Lys Lys Asp Lys Ser Gly Val Leu Leu  
1 5 10 15

Lys Asp Lys Asn Thr Glu Glu Gly Arg Lys Lys Glu Arg Gln Lys Pro  
20 25 30

Met Ser Ile Lys Ser Ile Asn Lys Lys Lys Lys Lys Asn Asn Asn Asn  
35 40 45

Asn Asn Asn Asn Asn Val Leu Lys Asn Leu Asn Asn Glu Glu Ile Asn  
50 55 60

Lys Gln Arg Asn Met Thr Asn Glu Arg Ile Arg Asn Lys Asn Lys Asn  
65 70 75 80

Asp Lys Gly Val Glu Asn Ile Ser Ser Asn Thr Gln Met Glu Glu Lys  
85 90 95

Asn Ile Ile Cys Lys Asp Ile Asn Ser Asn Val Ile Leu Asn Gln Asn  
100 105 110

Glu Ile Asn Asp Asp Gln Met Val Gln Lys Ile Lys Glu Asn Phe Val  
115 120 125

Lys Asp Leu Met Lys Asn Glu Asn Lys Glu Ile Phe Lys Gln Ile Glu  
130 135 140

Thr Ile Asn Ser Val Gly Thr Met Ala Lys Ile Lys Asn Ser Leu Tyr  
145 150 155 160

Ser Ile Ile Phe Lys Gly Ser Asn Phe Trp Lys Gly Leu Gly Ile Tyr  
165 170 175

Leu Cys Thr Leu Ser Gly Ala Ala Leu Gly Gln Leu Ile Leu Ala Gly  
180 185 190

Ile Leu Gln Phe Gly Thr Phe Ser Val Met Asn Phe Ser Ile Tyr Phe  
195 200 205

Ser Ala Val Pro Ser Phe Ile Ala Phe Ser Ser Phe Val Gly Ile Ile  
210 215 220

Leu Leu Ser Ile Ile Ile Val Ile Cys Leu Leu Val Trp Leu Trp Pro  
225 230 235 240

Ser Arg Gly Lys Leu Met Gly Lys Asp Lys Thr Glu Asn Lys Ser Asp  
245 250 255

Thr

&lt;210&gt; 199

&lt;211&gt; 307

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 199

Glu Leu Tyr Thr Ser Ile Tyr Asp Asp Asp Pro Glu Met Lys Glu Ile  
1 5 10 15

Met His Asp Phe Asp Arg Gln Thr Ser Gln Arg Phe Glu Glu Tyr Asn  
20 25 30

Glu Arg Met Asn Lys Asn Arg Gln Lys Cys Lys Glu Gln Cys Asp Arg  
35 40 45

Asp Ile Lys Asn Ile Ile Leu Lys Asp Lys Ile Glu Lys Glu Leu Lys  
50 55 60

Gln Gln Leu Ala Thr Leu Glu Thr Asp Ile Ser Thr Asp Asp Ile Pro  
65 70 75 80

Thr Cys Val Cys Asn Lys Ser Val Ala Asp Lys Val Glu Lys Thr Cys  
85 90 95

Leu Lys Cys Gly Gly Val Leu Gly Gly Ala Val Pro Glu Leu Gly Leu  
100 105 110

Leu Cys Gly Tyr Gly Ala Tyr Glu Leu Val Lys Val Ala Ile Gly Ala  
115 120 125

Ala Glu Lys Ala Ala Ile Ala Glu Gly Ala Lys Ala Gly Ile Ala Glu  
130 135 140

Gly Ile Arg Val Ala Ile Lys Gly Ile Lys Asp Ala Phe Asn Ile Glu  
145 150 155 160

Phe Leu Asp Gly Lys Thr Leu Ala Glu Val Ile Thr Gly Lys Thr Phe  
165 170 175

Asn Asn Ser Thr Phe Phe Val Glu Lys Phe Val Gln Glu Tyr Asn Thr  
180 185 190

Val Cys Leu Ser Ser Thr Thr Tyr Gln Asp Thr Leu Phe Cys Asp Tyr  
195 200 205

Gly Ser Met Phe Gly Gly Lys Val Asp Asn Ile Thr Ala Ile Ser Leu  
210 215 220

Asn Ala Lys Asn Thr Ala Ile Lys Ala Gly Gln Ala Ala Ala Lys Met  
225 230 235 240

Thr Thr Glu Thr Thr Lys Ala Leu Thr Ala Glu Lys Thr Gly Glu Val  
245 250 255

Thr Ser Thr Ser Ala Ile Phe Ser Asn Pro Met Val Ile Ser Phe Ile  
260 265 270

Val Val Val Ile Ile Val Ile Ile Leu Leu Ile Ile Tyr Leu Ile Leu  
275 280 285

Arg Tyr Arg Arg Lys Lys Lys Met Lys Arg Lys Leu Gln Tyr Ile Lys  
290 295 300

Leu Leu Glu  
305

<210> 200  
 <211> 316  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 200  
 Met Lys Met His Tyr Ser Glu Ile Leu Phe Phe Ser Leu Ser Leu Asn  
 1 5 10 15  
 Ile Leu Ile Thr Ser Ser Tyr Ala His Ser Glu Asn Lys Gln Tyr Ile  
 20 25 30  
 Thr Pro Tyr Thr Pro Asn Thr Ser Arg Val Leu Thr Glu Cys Asp  
 35 40 45  
 Ile Lys Met Ser Ile Tyr Asp Asn Asp Gly Asp Met Lys Ser Val Lys  
 50 55 60  
 Glu Asn Phe Asp Arg Gln Thr Ser Glu Arg Phe Glu Glu Tyr Asp Glu  
 65 70 75 80  
 Arg Met Lys Asp Lys Arg Arg Lys Cys Lys Glu Gln Cys Asp Lys Asp  
 85 90 95  
 Ile Gln Glu Ile Ile Val Lys Asp Lys Met Glu Lys Ser Leu Ala Lys  
 100 105 110  
 Lys Val Glu Lys Gly Cys Leu Arg Cys Gly Cys Gly Leu Gly Gly Val  
 115 120 125  
 Ala Ala Ser Val Gly Ile Ile Gly Pro Ile Ala Val Asn Glu Val Lys  
 130 135 140  
 Lys Ala Ala Leu Val Ala Ala Ala Gln Lys Gly Ile Glu Val Gly Met  
 145 150 155 160  
 Ala Lys Ala Ile Glu Glu Leu Gly Lys Ile Val Gly Leu Ser Asp Phe  
 165 170 175  
 Ser Tyr Leu Asn Trp Ser Ala Met Ile Thr Ala Thr Thr Tyr Tyr Lys  
 180 185 190  
 Pro Met Lys Leu Val Asn Ile Val Asn Ser Ala Asn Ser Met Cys Thr  
 195 200 205  
 Asp Ser Asn Pro Ala Phe Thr Ser Leu Phe Cys Lys Ala Ser Tyr Arg  
 210 215 220  
 Ile Asn Ser Glu Val Ser Ser Ser Arg Phe Thr Glu Val Ile Ser Gln  
 225 230 235 240  
 Glu Ala Ala Lys Ala Ala Ser Ala Ala Gly Glu Ala Ala Lys Asn Ala  
 245 250 255  
 Glu Lys Ala Gln Ile Ala Leu Val Asn Glu Glu Ser Ala His Leu Tyr  
 260 265 270  
 Ser Ala Ile Gly Tyr Ser Val Ile Ala Ile Leu Ile Ile Leu Leu Val  
 275 280 285  
 Met Val Ile Ile Tyr Leu Ile Leu Arg Tyr Arg Arg Lys Lys Lys Met  
 290 295 300  
 Asn Lys Lys Leu Gln Tyr Thr Lys Leu Leu Asn Gln  
 305 310 315

<210> 201  
 <211> 368



&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 201

```

Met Lys Val His Tyr Met Asn Ile Leu Leu Phe Ala Leu Pro Leu Asn
 1          5          10          15

Ile Leu Glu His Asn Glu Arg Asp His Asn Asn Thr Thr Leu His Thr
          20          25          30

Ser Ile Thr Arg Ser Leu Cys Glu Phe Glu Leu Tyr Glu Pro Ala Asn
          35          40          45

Tyr Asp Asn Asp Gln Glu Met Lys Glu Val Met Gln Gln Phe Glu Val
          50          55          60

Arg Thr Ser Gln Arg Phe His Glu Tyr Asp Glu Ser Leu Gln Ser Lys
          65          70          75          80

Arg Lys Gln Cys Lys Asp Gln Cys Asp Lys Glu Ile Gln Lys Ile Ile
          85          90          95

Leu Lys Asp Lys Leu Glu Lys His Met Ala Gln Gln Leu Ser Thr Leu
          100          105          110

Glu Thr Arg Ile Thr Thr Asp Asp Ile Pro Thr Cys Val Cys Glu Lys
          115          120          125

Ser Met Ala Asp Lys Val Glu Lys Gly Cys Leu Arg Cys Gly Cys Ile
          130          135          140

Leu Gly Ala Ala Met Pro Glu Leu Gly Ser Val Gly Gly Ser Leu Leu
          145          150          155          160

Tyr Ala Leu Asn Thr Trp Lys Pro Val Ala Leu Lys Ala Ala Ile Ala
          165          170          175

Ala Ala Asn Lys Ala Gly Met Ala Ala Gly Ile Lys Ala Gly Asp Ala
          180          185          190

Ala Gly Met Asn Val Val Ile Val Gln Leu Gly Lys Trp Gly Ile Asn
          195          200          205

Glu Phe Cys Pro Glu Ile Phe Glu Ser Ile Leu Lys Ile Asn His Tyr
          210          215          220

Ser Lys Leu Lys Asp Phe Ala Ser Ala Ile Val Ala Glu His Asp Lys
          225          230          235          240

Ile Cys Ala Ile Thr Thr Ser Gly Glu Asn Ser Met Cys Leu Pro Phe
          245          250          255

Asp Ile Ala Leu Gly Leu Ser Asp Ala Lys Gly Thr Pro Ile Gly Pro
          260          265          270

Pro Ala Ser Gln Ala Ile Pro Lys Met Met Asn Gln Leu Val Gly Lys
          275          280          285

Ala Lys Gly Thr Ala Asp Phe Met Ala Asn Lys Val Asn Ser Glu Thr
          290          295          300

Tyr Ser Lys Ile Ile Thr Lys Gln Ala Asp Leu Ile Glu Ala Gly Phe
          305          310          315          320

Asn Ser Cys Thr Thr Ser Ile Tyr Ala Ser Ile Ile Val Ile Leu Ile
          325          330          335

Ile Val Leu Ile Met Val Ile Ile Tyr Leu Ile Leu Arg Tyr Arg Arg
          340          345          350

```

Lys Lys Lys Met Lys Lys Lys Leu Gln Tyr Ile Lys Leu Leu Glu Glu  
 355 360 365

<210> 202

<211> 348

<212> PRT

<213> Plasmodium falciparum

<400> 202

Met Lys Leu His Tyr Thr Lys Ile Leu Leu Phe Phe Phe Pro Leu Asn  
 1 5 10 15  
 Ile Leu Leu Thr Ser Tyr His Ala His Asn Lys Asn Lys Pro Tyr Ile  
 20 25 30  
 Thr Ser Arg His Arg Gln Thr Ser Thr Ser Arg Val Leu Ser Glu Ser  
 35 40 45  
 Asp Pro Tyr Met Leu Asn Tyr Asp Asn Asp Asp Asp Met Lys Ser Val  
 50 55 60  
 Lys Glu Asn Phe Asp Arg Gln Thr Ser Gln Arg Phe Glu Glu Tyr Glu  
 65 70 75 80  
 Gly Arg Met Lys Asp Lys Arg Arg Lys Cys Lys Glu Gln Cys Asp Lys  
 85 90 95  
 Asp Ile Gln Glu Ile Ile Leu Lys Asp Lys Met Glu Lys Ser Leu Ala  
 100 105 110  
 Glu Lys Val Glu Ile Gly Cys Leu Arg Cys Gly Cys Gly Leu Gly Gly  
 115 120 125  
 Val Ala Ala Ser Val Gly Ile Phe Gly Thr Val Ala Val Lys Glu Leu  
 130 135 140  
 Ala Lys Thr Ala Thr Ala Ala Ala Val Ala Ala Ala Gln Glu Ala Val  
 145 150 155 160  
 Lys Asp Ala Ala Met Ala Ala Thr Ile Lys Ala Val Gly Ala Ala Ala  
 165 170 175  
 Gly Lys Glu Phe Val Ile Ala Gly Leu Lys Gln Met Gly Val Ser Thr  
 180 185 190  
 Leu Asp Gly Lys Glu Leu Gly Thr Tyr Ile Thr Ala Thr Asn Tyr Thr  
 195 200 205  
 Asn Val Lys Asn Ile Ala His Ala Ile Asn Thr Gln Tyr Glu Pro Ser  
 210 215 220  
 Ser Cys Leu Ile Thr Val Pro Val Asp Ser Lys Pro Ile Cys Thr Trp  
 225 230 235 240  
 Val Arg Ala Lys Glu Gly Ala Ala Arg Val Ile Gln Gly Lys Gln Phe  
 245 250 255  
 Ser Thr Gln Glu Thr Ile Lys Val Ala Val Thr Ser Ile Val Ser Asp  
 260 265 270  
 Ala Glu Asn Val Ala Ala Ala Ala Glu Gln Gln Ala Thr Lys Asp Ala  
 275 280 285  
 Ile Lys Ala Ser Thr Leu Ala Val Asp Ser Lys Tyr Ala Ile Cys Gln  
 290 295 300

Asn Ala Ile Ile Ala Ser Val Val Ala Leu Leu Ile Ile Val Leu Ile  
 305 310 315 320  
 Met Ile Ile Ile Tyr Leu Val Leu Arg Tyr Arg Arg Lys Lys Lys Met  
 325 330 335  
 Lys Lys Lys Ala Glu Tyr Thr Lys Leu Leu Asn Gln  
 340 345

<210> 203  
 <211> 304  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 203  
 Met Asn Met Tyr Tyr Val Lys Met Leu Leu Phe Ala Phe Leu Ile Asn  
 1 5 10 15  
 Thr Leu Val Leu Pro His Tyr Glu Asn Tyr Leu Asn Asn His Tyr Asn  
 20 25 30  
 Val Cys Leu Ile Gln Asn Lys Thr Lys Arg Thr Thr Ile Asn Ser Arg  
 35 40 45  
 Leu Leu Ala Gln Thr Lys Asn His Asn Pro His Tyr His Asn Asp Pro  
 50 55 60  
 Glu Leu Lys Glu Ile Ile Asp Lys Met Asn Glu Glu Ala Ile Lys Lys  
 65 70 75 80  
 Tyr Gln Lys Ser His Asp Pro Tyr Glu Gln Leu Lys Glu Val Val Glu  
 85 90 95  
 Lys Asn Gly Thr Ile Tyr Thr Gly Gly Asn Gly Ala Glu Pro Met Ser  
 100 105 110  
 Thr Thr Glu Lys Asp Leu Leu Glu Thr Tyr Lys Glu Val Phe Asp Asp  
 115 120 125  
 Glu Ser Asp Met Leu Lys Ser Gly Met Ser Gln Asn Val Asp Glu Lys  
 130 135 140  
 Ser Ser Thr Cys Glu Cys Thr Asp Ile Asn Gly Ala Lys Leu Thr Lys  
 145 150 155 160  
 Thr Lys Gly Lys Asp Lys Tyr Leu Lys His Leu Lys Gly Arg Cys Thr  
 165 170 175  
 Arg Gly Ile Cys Val Cys Ser Val Ser Ser Val Phe Leu Thr Leu Ile  
 180 185 190  
 Gly Leu Ile Thr Ala Lys Asn Ala Ala Val Ala Ala Val Thr Ser Ser  
 195 200 205  
 Phe Asn Glu Ala Ser Lys Ile Cys Ala Ser Ser Ile Ser Val Leu His  
 210 215 220  
 Met Phe Thr His Glu Ser Val Thr Leu Ser Met Pro Ser Val Thr Ala  
 225 230 235 240  
 Ala Gly Gly Val Glu Cys Phe Ser Asp Leu Ala Gly Thr Ile Ser Ser  
 245 250 255  
 Ala Ala Met Gly Val Phe Glu Pro Cys Gly Ile Ala Ala Leu Val Leu  
 260 265 270  
 Leu Ile Leu Ala Val Val Leu Ile Ile Leu Tyr Ile Trp Leu Tyr Arg  
 275 280 285

Arg Arg Lys Asn Ser Tyr Lys His Glu Cys Lys Lys His Leu Cys Lys  
 290 295 300

<210> 204  
 <211> 136  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 204  
 Ile Asn Thr Val Leu Phe Lys Asn Met Lys Arg Lys Lys Lys Lys Lys  
 1 5 10 15  
 Asn Ile His Val Tyr Thr Tyr Ile Leu His Leu Tyr Ile Pro Ile Tyr  
 20 25 30  
 Pro Tyr Met His Lys Pro Thr Cys Ile His Thr Tyr Ile Tyr Thr Asn  
 35 40 45  
 Thr Tyr Ile Leu Ile Phe Ile Tyr Arg Lys Lys Pro Asn Ile Thr Ser  
 50 55 60  
 Gly Arg Thr Asn Leu Phe Arg Val Ile Asp Ile Thr Gln Asn Ala Tyr  
 65 70 75 80  
 Glu Ile Phe Thr Thr Lys Ser Pro Asn Arg Tyr Val Pro Tyr Glu Ser  
 85 90 95  
 Gly Arg Tyr Lys Cys Lys Thr Tyr Ile Tyr Met Glu Gly Glu Glu Thr  
 100 105 110  
 Asp Asp Tyr Ser Tyr Val Leu Thr Tyr Leu Pro Leu Ile Leu Leu Leu  
 115 120 125  
 His Gln Lys Val Ser Met Lys Arg  
 130 135

<210> 205  
 <211> 129  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 205  
 Asp Leu Leu His Lys Trp Leu Asp Arg His Arg Asp Met Cys Glu Gln  
 1 5 10 15  
 Trp Asn Asn Lys Glu Asp Ile Leu Asn Lys Leu Asn Glu Glu Trp Thr  
 20 25 30  
 Ile Glu His Asn Glu Asp Leu Leu Asp Ile Pro Ser Ser Ser His Asp  
 35 40 45  
 Asp Ile Leu Lys Ile Lys Asp Glu Thr Tyr Asn Ile Ile Ser Thr Asn  
 50 55 60  
 Asn Leu Tyr Ser Tyr Glu Asn Asn Asp Ile Thr Pro His Gln Leu Gly  
 65 70 75 80  
 Leu Pro Asn Ile Ile Pro Ser Gly Ile Ile Lys His Gln Asn Asn Gly  
 85 90 95  
 Leu Arg Thr Asn Ile Ser Met Asp Ile Pro Phe Asp Glu Gln Asn Asn  
 100 105 110  
 Asn Leu Glu Asn Ser Asn Ile Thr Tyr Glu Asp Asp Glu Val Gln Asn  
 115 120 125

Ser

&lt;210&gt; 206

&lt;211&gt; 330

&lt;212&gt; PRT

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 206

```

Met Lys Asp His Tyr Ile Asn Ile Leu Leu Phe Ala Leu Pro Leu Asn
 1          5          10          15

Ile Leu Val Tyr Asn Gln Arg Asn Tyr Tyr Ile Thr Arg Thr Pro Lys
          20          25          30

Ala Thr Thr Arg Thr Leu Cys Glu Cys Glu Leu Tyr Ala Pro Ala Thr
          35          40          45

Tyr Asp Asp Asp Pro Gln Met Lys Glu Val Met Asp Asn Phe Asn Arg
 50          55          60

Gln Thr Gln Gln Arg Phe His Glu Tyr Asp Glu Arg Met Lys Thr Thr
 65          70          75          80

Arg Gln Lys Cys Lys Asp Gln Phe Asp Lys Glu Ile Gln Lys Ile Ile
          85          90          95

Leu Lys Asp Lys Leu Glu Lys Glu Leu Met Asp Lys Phe Ala Thr Leu
          100          105          110

Gln Thr Asp Ile Gln Asn Asp Ala Ile Pro Thr Cys Ile Cys Glu Lys
          115          120          125

Ser Leu Ala Asp Lys Val Glu Lys Thr Cys Leu Arg Cys Gly Ser Val
          130          135          140

Phe Gly Gly Gly Ile Thr Pro Gly Trp Gly Leu Ile Ser Gly Leu Gly
          145          150          155          160

Tyr Val Gly Trp Thr Asn Tyr Ile Thr Glu Ile Ala Ile Gln Lys Gly
          165          170          175

Ile Glu Ala Gly Val Lys Ala Gly Ile Gln Glu Leu Lys Gly Phe Ala
          180          185          190

Gly Leu Ser Arg Leu Ile Asn Phe Ser Glu Ile Lys Asn Leu Ile Asn
          195          200          205

His Thr Asn Tyr Phe Lys Glu Met Thr Tyr Val Ser Phe Leu Gln Asp
          210          215          220

Ala Asn Lys Thr His Cys Ser Ala Arg Pro Thr Ser Lys Glu Ile Phe
          225          230          235          240

Cys Asn Phe Val Ser His Asn Gly Glu Ser Ala Leu Ser Lys Arg Ala
          245          250          255

Ala Gly Ile Ala Asp Tyr Ala Ala Asp Met Ala Lys Ile Thr Glu Glu
          260          265          270

Gly Val Leu Glu Glu Gly Ala Ser Ala Thr Ser Ser Leu Thr Thr Ala
          275          280          285

Ile Ile Ala Ser Ile Ile Ala Ile Val Val Ile Ile Leu Ile Met Ile
          290          295          300

Ile Ile Tyr Leu Val Leu Arg Tyr Leu Arg Lys Lys Lys Met Lys Lys
          305          310          315          320

```

Lys Leu Glu Tyr Ile Lys Leu Leu Lys Glu  
325 330

<210> 207

<211> 345

<212> PRT

<213> Plasmodium falciparum

<400> 207

Met Lys Leu His Phe Pro Lys Ile Leu Leu Phe Phe Phe Pro Ser Asn  
1 5 10 15

Ile Leu Leu Thr Ser Tyr His Val His Ser Lys Asn Lys Pro Tyr Ile  
20 25 30

Thr Pro Arg His Thr Pro Thr Ile Thr Ser Arg Val Leu Arg Glu Cys  
35 40 45

Asp Ile His Lys Ser Ile Tyr Asp Asn Asp Glu Asp Met Lys Ser Val  
50 55 60

Lys Glu Asn Phe Asp Arg Gln Ile Ser Gln Arg Phe Glu Glu Tyr Glu  
65 70 75 80

Glu Arg Met Lys Gly Lys Arg Gln Lys Arg Lys Glu Glu Arg Asp Lys  
85 90 95

Asn Ile Gln Glu Ile Ile Glu Lys Asp Arg Met Asp Lys Ser Leu Ala  
100 105 110

Glu Lys Val Glu Lys Cys Cys Leu Ile Cys Gly Cys Gly Leu Gly Gly  
115 120 125

Val Ala Ala Ser Val Gly Ile Phe Gly Gly Ile Ala Ile Ser Glu Leu  
130 135 140

Lys Lys Ala Ala Met Ile Ala Ala Ile Ala Ser Ala Gln Lys Thr Gly  
145 150 155 160

Val Leu Ala Gly Glu Ala Ala Arg Ile Pro Ala Gly Ile Lys Ala Val  
165 170 175

Ile Ala Gly Leu Lys Arg Met Gly Ile Ser Thr Leu Gly Gly Lys Asp  
180 185 190

Leu Gly Ser Tyr Phe Ala Thr Thr Asp Tyr Thr Asn Phe Lys Thr Ile  
195 200 205

Ala Arg Val Ile Asn Ser Glu Tyr Gln Thr Asp Ser Cys Leu Ile Gly  
210 215 220

Gly Pro Ala Thr Asp Lys Ser Lys Thr Ile Cys Asn Trp Val Arg Ala  
225 230 235 240

Asn Phe Val Ala Pro Gln Asp Ser Pro Gly Lys Gly Gly Ser Val Tyr  
245 250 255

Lys Ser Ile Glu Thr Ala Val Lys Ser Ile Val Thr Asp Ala Glu Thr  
260 265 270

Val Ala Gln Arg Ala Val Glu Asn Ala Thr Glu Glu Val Ile Lys Asn  
275 280 285

Ser Thr Ala Ala Ala Glu Ser Thr Tyr Ala Gly Cys Gln Thr Ala Ile  
290 295 300

Ile Ala Ser Val Val Ala Ile Ile Ile Ile Ala Leu Val Met Ile Ile  
305 310 315 320

Ile Tyr Leu Val Leu Arg Tyr Arg Arg Lys Lys Lys Met Lys Lys Lys  
 325 330 335

Ala Glu Tyr Thr Lys Leu Leu Asn Gln  
 340 345

<210> 208

<211> 431

<212> PRT

<213> Plasmodium falciparum

<400> 208

Met Met Ser Ile Ser Ala Phe Pro Leu Ser Val Gly Ile Ala Phe Ala  
 1 5 10 15

Ala Leu Ser Tyr Phe Leu Leu Lys Lys Lys Ser Lys Phe Ser Val Asp  
 20 25 30

Leu Leu Arg Val Leu Asn Ile Pro Lys Gly Asp Tyr Glu Met Pro Thr  
 35 40 45

Leu Lys Ser Lys Asn Arg Tyr Ile Pro Tyr Arg Ser Gly Gln Tyr Lys  
 50 55 60

Gly Lys Thr Tyr Leu Tyr Val Glu Gly Asp Thr Asp Glu Glu Lys Tyr  
 65 70 75 80

Met Phe Met Ser Asp Thr Thr Asp Ile Thr Ser Ser Glu Ser Glu Tyr  
 85 90 95

Glu Glu Met Asp Ile Asn Asp Ile Tyr Val Pro Gly Ser Pro Lys Tyr  
 100 105 110

Lys Thr Leu Ile Glu Val Val Leu Glu Pro Ser Lys Ser Asn Gly Asn  
 115 120 125

Thr Leu Gly Asp Met Val Gly Thr Thr Ile Phe Thr Asp Glu Glu Trp  
 130 135 140

Asn Gln Leu Lys Asp Asp Phe Ile Ser Gln Tyr Leu Pro Asn Thr Glu  
 145 150 155 160

Pro Asn Asn Asn Tyr Arg Ser Gly Asn Ser Pro Thr Asn Thr Asn Asn  
 165 170 175

Thr Thr Thr Ser His Asp Asn Met Gly Glu Lys Pro Phe Ile Met Ser  
 180 185 190

Ile His Asp Arg Asn Leu Tyr Thr Gly Glu Glu Ile Ser Tyr Asn Ile  
 195 200 205

Asn Met Ser Thr Asn Thr Asn Asn Asp Ile Pro Lys Tyr Val Ser Asn  
 210 215 220

Asn Val Tyr Ser Gly Ile Asp Leu Ile Asn Asp Thr Leu Ser Gly Asn  
 225 230 235 240

Lys His Ile Asp Ile Tyr Asp Glu Val Leu Lys Arg Lys Glu Asn Glu  
 245 250 255

Leu Phe Gly Thr Asn His Val Lys Gln Thr Ser Ile His Ser Val Ala  
 260 265 270

Lys Asn Thr Tyr Ser Asp Asp Ala Ile Thr Asn Lys Ile Asn Leu Phe  
 275 280 285

His Lys Trp Leu Asp Arg His Arg Asp Met Cys Glu Lys Trp Glu Asn  
 290 295 300

His His Glu Arg Leu Ala Lys Leu Lys Glu Lys Trp Glu Asn Asp Asn  
 305 310 315 320  
 Asp Gly Gly Asn Val Pro Ser Asp Asn His Val Leu Asn Thr Asp Val  
 325 330 335  
 Ser Ile Glu Ile Asp Met Asp Asn Pro Lys Pro Ile Asn Gln Phe Ser  
 340 345 350  
 Asn Met Asp Ile Asn Val Asp Thr Pro Thr Met Asp Asn Met Glu Asp  
 355 360 365  
 Asp Ile Tyr Tyr Asp Val Asn Asp Asn Asp Asp Asn Asp Gln Pro  
 370 375 380  
 Ser Val Tyr Asp Ile Pro Met Asp His Asn Lys Val Asp Val Asp Val  
 385 390 395 400  
 Pro Lys Lys Val His Ile Glu Met Lys Ile Leu Asn Asn Thr Ser Asn  
 405 410 415  
 Gly Ser Leu Glu Gln Gln Phe Pro Ile Ser Asp Val Trp Asn Ile  
 420 425 430

<210> 209  
 <211> 327  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 209  
 Met Lys Val His Tyr Ile Asn Ile Leu Leu Phe Ala Leu Pro Leu Asn  
 1 5 10 15  
 Ile Leu Ile Tyr Asn Gln Arg Asn His Lys Ser Thr Thr His His Thr  
 20 25 30  
 Leu Lys Ile Pro Ile Thr Arg Leu Leu Cys Glu Cys Glu Leu Tyr Ala  
 35 40 45  
 Pro Thr Asn Tyr Asp Ser Asp Pro Glu Met Lys Arg Val Met Gln Gln  
 50 55 60  
 Phe Val Asp Arg Thr Thr Gln Arg Phe His Glu Tyr Asp Asn Arg Met  
 65 70 75 80  
 Lys Asp Lys Arg Gln Lys Cys Lys Asp Lys Cys Asp Lys Glu Ile Gln  
 85 90 95  
 Lys Ile Ile Leu Lys Asp Lys Leu Glu Lys Glu Leu Met Asp Lys Phe  
 100 105 110  
 Ala Thr Leu Gln Thr Asp Ile Gln Asn Asp Ala Ile Pro Thr Cys Val  
 115 120 125  
 Cys Glu Lys Ser Leu Ala Asp Lys Val Glu Lys Val Cys Phe Arg Cys  
 130 135 140  
 Gly Gly Leu Leu Gly Gly Gly Ile Ala Pro Gly Trp Gly Leu Val Ser  
 145 150 155 160  
 Gly Leu Gly Tyr Val Gly Trp Thr Asn Tyr Val Thr Gln Thr Ala Leu  
 165 170 175  
 Gln Lys Gly Ile Glu Ala Val Ile Ser Tyr Leu Glu Gln Ile Pro Gly  
 180 185 190  
 Ile Lys Gly Leu Pro Gly Phe Asn Leu Ala Asn Ile Val Asn Pro Asn  
 195 200 205



Asn Tyr Ser Ser Gly Gly Leu Leu Thr Thr Ala Ile Asp Ala Ala Ala  
 210 215 220  
 Arg Pro Ile Cys Ser Val Asn His Ser Lys Thr Pro Ala Phe Cys Ser  
 225 230 235 240  
 Tyr Ala Thr Gln Asn Gly Gly Ser Ile Ile Ala Lys Val Ser Val Asp  
 245 250 255  
 Ala Glu Asn Ala Ala Asn Ala Gly Ile Asp Ala Ala Ser Ala Glu Ala  
 260 265 270  
 Ala Asn Leu Ala Pro Lys Thr Leu Thr Leu Thr Asn Thr Ile Ile Val  
 275 280 285  
 Ser Phe Val Ala Ile Val Val Ile Val Leu Val Met Leu Ile Ile Tyr  
 290 295 300  
 Phe Ile Leu His Tyr Arg Arg Lys Lys Lys Met Lys Lys Lys Leu Gln  
 305 310 315 320  
 Tyr Ile Lys Leu Leu Lys Glu  
 325

<210> 210  
 <211> 2197  
 <212> PRT  
 <213> Plasmodium falciparum

<400> 210  
 Met Gly Ser Gly Lys Gly Gly Asp Pro Gln Asp Glu Ser Val Lys His  
 1 5 10 15  
 Met Phe Asp Arg Ile Gly Glu Asp Val Tyr Glu Gln Val Lys Ser Glu  
 20 25 30  
 Thr Val Asn Tyr Val Ser Glu Leu Glu Gly Lys Leu Ser Leu Ala Pro  
 35 40 45  
 Ile Leu Gly Val Glu Ser Gly Ser Thr Asn Glu Thr Cys Asn Leu Val  
 50 55 60  
 Gln Asp Tyr Tyr Asn Lys Pro Val Tyr Gly Asn Ser Asn Arg Tyr Pro  
 65 70 75 80  
 Cys Lys Asn Leu Lys Gly Ile Thr Asn Glu Glu Arg Phe Ser Asp Thr  
 85 90 95  
 Leu Gly Gly Gln Cys Thr Asn Lys Lys Ile Lys Gly Asn Glu Tyr Ser  
 100 105 110  
 Thr Lys Ser Gly Lys Asp Cys Gly Ala Cys Ala Pro Tyr Arg Arg Leu  
 115 120 125  
 His Leu Cys Ser His Asn Leu Glu Ser Ile Asp Thr Thr Ser Met Thr  
 130 135 140  
 His Lys Leu Leu Leu Glu Val Cys Met Ala Ala Lys Tyr Glu Gly Asn  
 145 150 155 160  
 Ser Ile Asp Thr His Tyr Pro Gln His Gln Arg Thr Asn Glu Asp Ser  
 165 170 175  
 Pro Ser Gln Ile Cys Thr Met Leu Ala Arg Ser Phe Ala Asp Ile Gly  
 180 185 190  
 Asp Ile Val Arg Gly Lys Asp Leu Phe Tyr Gly Asn Ser Lys Glu Lys  
 195 200 205

Glu Lys Arg Asp Glu Leu Glu Thr Asn Leu Lys Thr Ile Phe Gly Lys  
 210 215 220  
 Ile His Glu Lys Leu Lys Asp Lys Glu Gly Ala Glu Thr Arg Tyr Gly  
 225 230 235 240  
 Ser Asp Thr Thr Asn Tyr Tyr Gln Leu Arg Glu Asp Trp Trp Tyr Ala  
 245 250 255  
 Asn Arg Ala Thr Val Trp Glu Ala Ile Thr Cys Asp Val His Gly Ser  
 260 265 270  
 Asp Tyr Phe Arg Gln Thr Cys Gly Asp Lys Glu Thr Thr Ala Thr Arg  
 275 280 285  
 Val Lys Asp Lys Cys Arg Cys Lys Asp Glu Asn Gly Lys Lys Pro Gly  
 290 295 300  
 Ser Asn Ala Asp Gln Val Pro Thr Tyr Phe Asp Tyr Val Pro Gln Tyr  
 305 310 315 320  
 Leu Arg Trp Phe Glu Glu Trp Ala Glu Asp Phe Cys Arg Lys Lys Lys  
 325 330 335  
 Lys Lys Leu Glu Lys Leu Glu Gln Gln Cys Arg Asp Tyr Lys Gln Asn  
 340 345 350  
 Leu Tyr Cys Ser Gly Asn Gly Tyr Asp Cys Thr Lys Thr Ile Tyr Lys  
 355 360 365  
 Lys Gly Lys Leu Val Ile Gly Glu His Cys Thr Asn Cys Ser Val Trp  
 370 375 380  
 Cys Arg Leu Tyr Glu Ser Trp Ile Asp Asn Gln Lys Leu Glu Phe Leu  
 385 390 395 400  
 Lys Gln Lys Gln Lys Tyr Glu Thr Glu Ile Ser Asn Ser Gly Ser Cys  
 405 410 415  
 Gly Gly Ser Gly Gly Val Lys Gly Arg Asn Arg Lys Lys Arg Gly Ala  
 420 425 430  
 Gly Val Glu Thr Ala Thr Asn Tyr Asp Gly Tyr Glu Lys Lys Phe Tyr  
 435 440 445  
 Lys Glu Leu Lys Glu Ser Glu Tyr Gly Lys Val Asp Asp Phe Leu Lys  
 450 455 460  
 Leu Leu Asn Asn Glu Asp Val Cys Lys Lys Ile Lys Asp Glu Lys Glu  
 465 470 475 480  
 Lys Ile Asp Phe Thr Lys Pro Ala Asp Lys Asn Ser Asn Asn Glu Gly  
 485 490 495  
 Thr Phe Tyr His Ser Glu Tyr Cys Lys Pro Cys Pro Asp Cys Gly Val  
 500 505 510  
 Lys Arg Lys Asp Asn Gln Trp Lys Asp Lys Tyr Asp Gly Lys Cys Thr  
 515 520 525  
 Arg Gly Lys Leu Tyr Glu Pro Ala Ser Gly Ala Gln Gly Thr Pro Ile  
 530 535 540  
 Lys Ile Leu Lys Ser Gly Glu Lys Gln Lys Glu Ile Glu Thr Lys Leu  
 545 550 555 560  
 Lys Ala Phe Cys Asp Gln Thr Asn Gly Asp Thr Thr Asn Ser Val Ala  
 565 570 575

Arg	Gly	Gly	Ala	Asp	Gly	Ser	Gly	Ser	Lys	Ser	Asn	Ser	Lys	Glu	
		580					585					590			
Leu	Tyr	Glu	Glu	Trp	Lys	Cys	Tyr	Asn	Glu	Val	Gln	Lys	Val	Lys	Asp
		595					600					605			
Asp	Lys	Asn	Gly	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Asp	Val	Asp	Lys
	610					615					620				
Val	Lys	Lys	Ala	Gly	Gly	Leu	Cys	Ile	Leu	Glu	Asn	Lys	Lys	His	Glu
	625				630					635					640
Ser	Arg	Asn	Asn	Ser	Ser	Asn	Glu	Pro	Glu	Gln	Phe	Gln	Lys	Thr	Phe
				645					650					655	
His	Asp	Phe	Phe	Tyr	Phe	Trp	Ile	Gly	Arg	Phe	Leu	Asn	Asp	Ser	Met
			660					665					670		
Tyr	Trp	Arg	Gly	Lys	Val	Asn	Ser	Cys	Ile	Asn	Asn	Pro	Lys	Arg	Lys
		675					680					685			
Lys	Cys	Arg	Asn	Glu	Cys	Lys	Asp	Asp	Cys	Gly	Cys	Phe	Lys	Glu	Trp
	690					695					700				
Ile	Gly	Lys	Lys	Lys	Glu	Glu	Trp	Glu	Asn	Ile	Lys	Lys	His	Phe	Lys
	705				710					715					720
Thr	Gln	Glu	Ala	Phe	Lys	Asn	Lys	Arg	Glu	Asn	Ser	Gly	Ile	Asp	Met
				725					730					735	
Phe	Ser	Gly	Leu	Met	Asp	Ser	Ala	Asp	Val	Val	Leu	Glu	Leu	Ala	Leu
			740					745				750			
Glu	Leu	Glu	Gln	Leu	Phe	Gln	Asp	Ile	Lys	Asp	Gly	Tyr	Gly	Asp	Val
		755					760					765			
Lys	Glu	Leu	Lys	Gly	Ile	Lys	Glu	Leu	Leu	Asp	Glu	Glu	Lys	Lys	Lys
	770					775					780				
Lys	Gln	Ala	Glu	Glu	Ala	Val	Val	Val	Val	Val	Ala	Asp	Asn	Gln	Lys
	785				790					795					800
Lys	Thr	Thr	Ile	Asp	Lys	Leu	Leu	Gln	His	Glu	Gly	Asp	Asp	Ala	Asn
			805						810					815	
Asn	Cys	Leu	Lys	Thr	His	Lys	Glu	Lys	Cys	Glu	Glu	Thr	Gln	Pro	Lys
		820						825					830		
Pro	Pro	Gly	Ala	Gly	Gly	Pro	Gly	Ala	Pro	Ser	Glu	Thr	Gly	Glu	Thr
		835					840					845			
Thr	Thr	Leu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Glu	Glu	Asp	Ala
		850				855					860				
Gly	Asp	Glu	Val	Glu	Glu	Gly	Glu	Thr	Val	Asp	Thr	Thr	Glu	Gly	Asp
	865				870					875					880
Glu	Thr	Glu	Thr	Val	Glu	Gln	Pro	Val	Lys	Asp	Thr	Asp	Arg	Glu	Gly
				885					890					895	
Glu	Glu	Glu	Glu	Ala	Lys	Lys	Ala	Thr	Asp	Thr	Thr	Thr	Ser	Leu	Asp
			900					905					910		
Val	Cys	Asp	Thr	Val	Lys	Asn	Ala	Leu	Thr	Asn	Asn	Asp	Asn	Leu	Thr
		915					920					925			
Asp	Ala	Cys	Lys	Leu	Lys	Tyr	Gly	Pro	Gly	Gly	Lys	Glu	Arg	Phe	Pro
	930					935					940				
Asn	Trp	Lys	Cys	Val	Ser	Ser	Gly	Glu	Lys	Ser	Val	Ala	Thr	Ala	Gly

945	950	955	960
Ser Ser Gly Ala Thr	Gly Lys Ser Gly Asp	Lys Gly Ala Ile Cys Val	
965	970	975	
Pro Pro Arg Arg Arg Arg	Leu Tyr Val Gly Gly Leu Thr	Lys Leu Thr	
980	985	990	
Ser Ala Gly Thr Ser Ser	Glu Ser Pro Gln Gly Gly Ser	Glu Ser Ser	
995	1000	1005	
Arg Ala Ser Asp Val Ser	Gln Gly Asn Gly Gly Asp Asp	Ile Thr Thr	
1010	1015	1020	
Thr Glu Ser Leu Arg Lys	Trp Phe Ile Glu Thr Ala Ala Ile Glu Thr		
1025	1030	1035	1040
Phe Phe Leu Trp His Arg Tyr	Lys Lys Glu Trp Glu Ala Gln Lys Lys		
1045	1050	1055	
Ala Glu Leu Gln Arg Asn Gly	Leu Leu Leu Gly Thr Gly Ala Ser Leu		
1060	1065	1070	
Asn Leu Gly Gly Asp Asp	Ser Asn Pro Gln Thr Gln Leu Gln Lys Ser		
1075	1080	1085	
Gly Thr Ile Pro Leu Asp Phe	Leu Arg Leu Met Phe Tyr Thr Leu Gly		
1090	1095	1100	
Asp Tyr Arg Asp Ile Leu Val	Arg Gly Val Ala Asp Asp Lys Asn Gly		
1105	1110	1115	1120
Gly Asn Asn Ile Ile Leu Asn	Ala Ser Gly Asn Lys Asp Glu Lys Gln		
1125	1130	1135	
Lys Met Glu Lys Ile Gln Glu	Lys Ile Glu Gln Ile Leu Pro Thr Ser		
1140	1145	1150	
Gly Asn Lys Glu Thr Arg Gly	Pro Gln Asn Ser Val Asn Asp Arg Gln		
1155	1160	1165	
Ser Leu Trp Asp Arg Ile Ala	Glu His Val Trp His Gly Met Val Cys		
1170	1175	1180	
Ala Leu Thr Tyr Lys Asp Asp	Asn Gly Leu Lys Gly Val Val Lys		
1185	1190	1195	1200
Lys Pro Gln Lys Ile Glu Asn	Pro Glu Lys Leu Trp Asn Glu Thr Thr		
1205	1210	1215	
Lys Lys Pro Lys Asp Glu Lys	Tyr Gln Tyr Gln Thr Ala Lys Leu Glu		
1220	1225	1230	
Asp Glu Ser Gly Glu Lys Arg	Pro Asp Ser Ser Ala Ser Gly Thr Lys		
1235	1240	1245	
Leu Thr Asp Phe Ile Lys Arg	Pro Pro Tyr Phe Arg Tyr Leu Glu Glu		
1250	1255	1260	
Trp Gly Glu Asn Phe Cys Lys	Lys Arg Thr Glu Met Leu Gly Lys Ile		
1265	1270	1275	1280
Lys Glu Asp Cys Tyr Lys Asn	Gly Gly Arg Cys Ser Gly Asp Gly Leu		
1285	1290	1295	
Lys Cys Asn Glu Ile Val Ile	Asp Lys Glu Lys Ile Phe Gly Asp Leu		
1300	1305	1310	
Leu Cys Pro Thr Cys Ala Arg	His Cys Arg Phe Tyr Lys Lys Trp Ile		
1315	1320	1325	

Asn Thr Lys Arg Asp Glu Phe Asn Lys Gln Ser Asn Ala Tyr Ser Glu  
 1330 1335 1340  
 Gln Lys Lys Lys Tyr Glu Glu Glu Asn Asp Ser Ala Gln Lys Asn Asn  
 1345 1350 1355 1360  
 Gly Val Cys Gly Thr Leu Lys Asp Asp Ala Ala Glu Phe Leu Asn Arg  
 1365 1370 1375  
 Leu Lys Asn Gly Pro Cys Lys Asn Glu Ser Glu Glu Asn Lys Lys Ala  
 1380 1385 1390  
 Glu Asp Glu Ile Asp Phe Lys Lys Pro Asp Asp Thr Phe Lys Asp Ala  
 1395 1400 1405  
 Asp Asn Cys Lys Pro Cys Ser Glu Phe Lys Ile Lys Cys Glu Asn His  
 1410 1415 1420  
 Asn Cys Ser Ser Gly Gly Asn Thr Gln Gly Lys Cys Asp Gly Lys Thr  
 1425 1430 1435 1440  
 Thr Ile Ala Ala Thr Glu Ile Glu Asn Ile Lys Thr Asn Thr Lys Glu  
 1445 1450 1455  
 Val Thr Met Leu Val Ser Asp Asp Ser Lys Ser Ala Thr Glu Phe Lys  
 1460 1465 1470  
 Asp Gly Leu Ser Glu Cys Lys Asp Lys Gly Ile Phe Lys Gly Ile Arg  
 1475 1480 1485  
 Lys Asp Glu Trp Glu Cys Gly Lys Val Cys Gly Val Asp Ile Cys Asn  
 1490 1495 1500  
 Leu Lys Lys Lys Asp Asn Ile Gly Lys Glu Ser Asp Lys Lys Tyr Ile  
 1505 1510 1515 1520  
 Ile Met Lys Glu Leu Leu Lys Arg Trp Leu Glu Tyr Phe Leu Glu Asp  
 1525 1530 1535  
 Tyr Asn Lys Ile Lys His Lys Ile Ser His Cys Thr Lys Asn Gly Lys  
 1540 1545 1550  
 Gly Ser Lys Cys Ile Lys Gly Cys Val Asp Lys Trp Val Gln Gln Lys  
 1555 1560 1565  
 Lys Glu Glu Trp Lys Gln Ile Lys Glu Arg Phe Asn Glu Gln Tyr Lys  
 1570 1575 1580  
 Ser Lys Thr Ser Asp Glu Tyr Phe Asn Val Lys Ser Phe Leu Glu Thr  
 1585 1590 1595 1600  
 Trp Ile Pro Lys Ile Ala Val Val Asn Asp Gln Asp Asn Val Ile Lys  
 1605 1610 1615  
 Leu Ser Lys Phe Gly Asn Ser Cys Gly Cys Ser Ala Ser Ala Ile Ser  
 1620 1625 1630  
 Thr Asn Gly Asn Glu Glu Asp Ala Ile Asp Cys Met Ile Lys Lys Leu  
 1635 1640 1645  
 Glu Lys Lys Ile Asp Glu Cys Lys Arg Lys Pro Gly Glu Asn Ser Gly  
 1650 1655 1660  
 Gln Thr Cys Asn Glu Thr Leu Thr His Pro Leu Asp Val Gln Asp Glu  
 1665 1670 1675 1680  
 Asp Glu Pro Leu Glu Glu Thr Glu Glu Asn Pro Val Gly Lys Gln His  
 1685 1690 1695

Pro Ser Phe Cys Pro Pro Val Glu Asp Lys Lys Lys Glu Glu Gly  
 1700 1705 1710

Glu Thr Cys Thr Pro Ala Ser Pro Ala Pro Ala Pro Ala Pro  
 1715 1720 1725

Ala Ser Pro Ser Pro Thr Pro Ala Pro Ala Asp Glu Pro Phe Asp Pro  
 1730 1735 1740

Thr Ile Leu Gln Thr Thr Ile Pro Leu Gly Ile Ala Leu Ala Leu Gly  
 1745 1750 1755 1760

Ser Ile Ala Phe Leu Phe Leu Lys Val Ile Tyr Ile Cys Val Val Tyr  
 1765 1770 1775

Met Tyr Ile Tyr Met Cys Phe Cys Ile Tyr Met Tyr Lys Lys Thr Lys  
 1780 1785 1790

His Pro Val Asp Leu Phe Ser Val Ile Asn Ile Pro Lys Ser Asp Tyr  
 1795 1800 1805

Asp Ile Pro Thr Lys Leu Ser Pro Asn Arg Tyr Ile Pro Tyr Thr Ser  
 1810 1815 1820

Gly Lys Tyr Arg Gly Lys Arg Tyr Ile Tyr Leu Glu Gly Asp Ser Gly  
 1825 1830 1835 1840

Thr Asp Ser Gly Tyr Thr Asp His Tyr Ser Asp Ile Thr Ser Ser Ser  
 1845 1850 1855

Glu Ser Glu Tyr Glu Glu Met Asp Ile Asn Asp Ile Tyr Val Pro Gly  
 1860 1865 1870

Ser Pro Lys Tyr Lys Thr Leu Ile Glu Val Val Leu Glu Pro Ser Gly  
 1875 1880 1885

Asn Asn Thr Thr Ala Ser Asp Thr Gln Asn Asp Ile Gln Asn Asp Gly  
 1890 1895 1900

Ile Pro Ser Asn Lys Phe Ser Asp Asn Glu Trp Asn Thr Leu Lys Asp  
 1905 1910 1915 1920

Asp Phe Ile Ser Asn Met Leu Gln Asn Gln Pro Lys Asp Val Pro Asn  
 1925 1930 1935

Asp Tyr Lys Ser Gly Asp Ile Pro Phe Asn Thr Gln Pro Asn Thr Leu  
 1940 1945 1950

Tyr Phe Asp Lys Pro Glu Glu Lys Pro Phe Ile Thr Ser Ile His Asp  
 1955 1960 1965

Arg Asn Leu Leu Asn Gly Glu Glu Tyr Ser Tyr Asn Val Asn Met Ser  
 1970 1975 1980

Thr Asn Ser Met Asp Asp Pro Lys Tyr Val Ser Asn Asn Val Tyr Ser  
 1985 1990 1995 2000

Gly Ile Asp Leu Ile Asn Asp Ser Leu Ser Gly Asn Lys His Ile Asp  
 2005 2010 2015

Ile Tyr Asp Glu Val Leu Lys Arg Lys Glu Asn Glu Leu Phe Gly Thr  
 2020 2025 2030

Asn His Val Lys His Thr Ser Ile His Ser Val Ala Lys Asn Thr Asn  
 2035 2040 2045

Ser Asp Pro Ile Leu Asn Gln Ile Asn Leu Phe His Thr Trp Leu Asp  
 2050 2055 2060

Arg His Arg Asp Met Cys Glu Lys Trp Glu Asn His His Glu Arg Leu

2065

2070

2075

2080

Ala Lys Leu Lys Glu Glu Trp Glu Asn Glu Thr His Ser Gly Asn Thr  
2085 2090 2095

His Pro Ser Asp Ser Asn Lys Thr Leu Asn Thr Asp Val Ser Ile Gln  
2100 2105 2110

Ile His Met Asp Asn Pro Lys Pro Ile Asn Gln Phe Thr Asn Met Asp  
2115 2120 2125

Thr Ile Leu Glu Asp Leu Asp Lys Pro Phe Asn Glu Pro Tyr Tyr Tyr  
2130 2135 2140

Asp Met Tyr Asp Asp Asp Ile Tyr Tyr Asp Val Asn Asp His Asp Thr  
2145 2150 2155 2160

Ser Thr Val Asp Thr Asn Ala Met Asp Val Pro Ser Lys Val Gln Ile  
2165 2170 2175

Glu Met Asp Val Asn Thr Lys Leu Val Lys Glu Lys Tyr Pro Ile Ala  
2180 2185 2190

Asp Val Trp Asp Ile  
2195

&lt;210&gt; 211

&lt;211&gt; 5136

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 211

atggcgactg	gtagtggggg	cgatagttca	cgggatgaaa	gtgtcaaaga	tttatttgat	60
agaataggga	agaaagttta	cgaaaaaaca	gaaaagattg	caaaacgata	tactactgaa	120
ttgcatgggtg	atttgtcaaa	agcaacatat	ccaaatgata	aacatcctga	aggatcaaca	180
gaaaataatc	catgcaaact	tcaatatgat	tataatacta	atgttactca	tggttttggt	240
caagagtatc	cttgtgaaac	ggacatagta	gaacgttttt	ctgatacaga	aggagcacia	300
tgtgataaga	aaaaaataaa	agataatagt	gaaggagctt	gcgctccata	tagacgatta	360
catgtatgcg	ttagaaattt	ggaaaatac	aatgattata	gtaaaattaa	taataaacat	420
aatttatggg	tagaagtgtg	tcttgcagcc	aaatatgaag	gggaatcaat	aacaggctcg	480
tatccacaac	atcaagaaac	taatcctgat	actaaatctc	aactatgtac	tgtattagca	540
cgaagttttg	cagatatagg	tgatattata	agaggaaaag	atctgtatcg	tggtggtaat	600
accaaagaaa	aaaaaaaaag	aaaaaaatta	gaagaaaatt	taaaaacgat	tttcgggcat	660
atatatgatg	aattgaagaa	tgggaagacg	aatggggagg	aggagctaca	aaaacgctac	720
cgagggtgata	aagataatga	tttttatcaa	ttacgagaag	attggtggga	cgtaaatcga	780
gaaacgggat	ggaaagctat	cacatgcaac	gctggaaagt	atcaatattc	tcaaccaaca	840
tgtggtcgtg	gagaaattcc	atatgtgacg	cttagtaaat	gccaatgtat	tgctggagaa	900
gttcctacat	attttgacta	tgccccacaa	tatttgagat	ggttcgagga	atgggcagaa	960
gacttttgtc	gtaaaaaaa	aaaaaaaata	ccaaacgtta	aaacaaattg	tcgtcaggta	1020
cagaggggta	aagaaaaata	ttgtgatcgt	gatggatata	attgtgatgg	tactattaga	1080
aagcaatata	tttatcgttt	ggatactgat	tgtactaaat	gttctcttgc	atgtaagact	1140
tttgcggaat	ggattgataa	ccaaaaagaa	caatttgaca	aacaaaaaca	aaaatatcaa	1200
aatgaaaata	caggtggtgg	tggtaggagg	caaaaacgga	gtacacatag	tactaaagag	1260
tatgaaggat	atgaaaaaca	ttttaatgaa	gaactacgaa	atgaaggcaa	agatgtgaga	1320
agctttttac	aattgttaag	taaagaaaaa	atatgtaaag	aaagaattca	agtaggagaa	1380
gaaacagcaa	attatggtaa	tttcgaaaaat	gaaagtaata	ctttttctca	tacggaatac	1440
tgcgatcggt	gtcctttgtg	tggagttgat	tgcagcagtg	ataactgtag	aaaaaagcca	1500
gataaatcat	gcgatgaaca	aattactgac	aaagaatacc	ctcctgaaaa	tactacgaaa	1560
atcccaaaac	ttaccgctga	aaaaagaaaag	acagggtatac	taaagaaata	tgaaaagtgt	1620
tgtaaaaaata	gtgatggtaa	taacggtggt	caaatataaaa	aatgggaatg	tcattatgaa	1680
aaaaatgata	aagatgatgg	caatggtgac	attaataatt	gcatacaagg	agattggaaa	1740
acttctaaaa	acgtatatata	ccctatatcc	tattattcat	ttttttatgg	ttcgattatt	1800
gatatgttaa	acgaatctat	tgagtggaga	gaaagactta	agagttgtat	aaatgatgag	1860
aaattaggaa	aattgtagaaa	aggatgtaaa	aatccatgtg	aatgttataa	acgatgggtt	1920
gaaaaaaaaa	aagacgaatg	ggacaaaata	aaagaatttt	ttcgcaagca	aaaagatttg	1980
ctaaaagaca	ttgcaggaa	ggatgctggc	gaacttcttg	aattttatgt	ggaaaatatt	2040
tttttggaag	atatgaaaaa	tgctaattgga	gatccaaaag	taatagaaaa	atttaaagaa	2100
attttgggaa	aggaaaatga	ggaagttaa	gatcctttta	aaacgaaaaa	aacaattgat	2160
gactttctcg	aaaaggaatt	aaacgaagcc	aaaaactgag	tagaaaaaaa	tccagataac	2220

gaatgtccaa	aacaaaaagc	ccccggcgat	ggtgcccgcc	cctccgaccc	accatgtgaa	2580
gacatcaccc	accacgacgg	cgaacactcc	tcagacgaag	acgaagaaga	agaagaagaa	2340
gaggagcagc	agccgcccgc	ggaaggcagc	gaacaggggg	aggagaagtc	ggagtccaag	2400
gaggtggtag	aacaacaaga	gacaccacaa	aaagacacag	aaaagacggt	accaacaaca	2460
acaccaacag	tagacgtttg	cgacacagtg	aaaaccgcac	tcgcgacac	gggcagtctc	2520
aatgctgcat	gttccctcaa	atatgttact	ggtaaaaact	acggctggcg	gtgtatcgca	2580
cctagtggta	ccactagtgg	aaaagacggg	gctatatgtg	tgccaccacg	aacacaagaa	2640
ttatgcttat	attatttaaa	agaattgagt	gacacaacac	aaaaagggtt	gagagaagca	2700
tttattaaaa	ctgcagcaca	agaaacttac	ttgttatggc	aaaaatataa	agaagacaaa	2760
cagaacgaaa	ctgcatcaac	agaactcgac	atagatgatc	cacaaacgca	attaaatggt	2820
ggagaaatcc	ctgaagattt	taaacgtcaa	atgttctata	cgtttggaga	ttatagagat	2880
ttgttttttag	gaagatatat	aggtaacgat	ttggataaag	tgaataataa	tataactgct	2940
gttttccaaa	atggtgatca	tattccta	ggccaaaaaa	ctgacagaca	acgtcaagaa	3000
ttttggggaa	catatggaaa	agatatgttg	aaaggaatgt	tatgtgcgct	acaagaagct	3060
ggggggaaaa	agacacttac	cgaaacgtac	aaactctcca	acgtgacatt	taagtgtcat	3120
ctcactggta	ctaaattgaa	tgagtttgct	tctagaccct	cattttttacg	atggatgact	3180
gaatggggag	atcaattttg	tagagaaagg	ataacacagt	tgcaaatttt	gaaggaaaga	3240
tgtatggtat	atcagtataa	tggtgataaa	ggtaaggatg	ataagaaaga	aaaatgtaca	3300
gaagcgtgta	catattataa	agaatggctt	acgaattggc	aagataatta	taaaaaacaa	3360
aatcaaagat	atactgaggt	taaaggaaca	tctccatata	aagaagattc	tgacgtaaaa	3420
gaatcaaagt	atgcccatgg	atattttaag	aaaatattaa	aaaatattat	atgcactagt	3480
ggtacagata	ttgcttattg	caattgcatg	gaaggaaacat	caaccactga	tagtagta	3540
aatgataata	ttcctgaatc	gttaaaatac	ccacctatag	aaattgaaga	gggatgtacg	3600
tgtaaggacc	cttcaccagg	agaagtaata	ccggagaaaa	aagttccaga	accaaagta	3660
ctacaaaaac	cacaaaaact	cccaaaacga	caaccaaaag	aacgagattt	cccaaccccc	3720
gcattaaaaa	atgccatggt	atcttcaacc	atcatgtgga	gtattggcat	cggtttttgct	3780
acattcactt	atttttatct	aaagaaaaaa	accaaactca	ctattgatct	tttgcgtgct	3840
attaatatcc	ccaaaagtga	ttatgatata	ccgacaaaac	tttcacccaa	tagatatata	3900
ccttatacta	gtggtaataa	cagaggcaaa	cggtacattt	accttgaagg	agatagtggg	3960
actgatagtg	gttacaccga	tcattatagt	gatattactt	catcttccga	aagtgagtat	4020
gaagaattgg	atattaatga	tatatatgca	ccacgtgctc	ctaaatataa	aacattgata	4080
gaagtagtac	tagaacctag	tggtacaac	acaacagcta	gtggtaacaa	cacacctagt	4140
gatacacaaa	atgatataca	aaatgatggt	atacctagta	gtaaaattac	agataatgag	4200
tggaatacat	tgaaagatga	atttatatca	caatatctac	aaagtgaaca	accaaattgat	4260
gtaccaaatg	attatagtag	tgagatatt	ccttttaaca	cacaacccaa	tactttatat	4320
tttgataatc	ctgatgaaaa	accttttatt	acatctatac	atgataggga	tttatatagt	4380
ggagaagaat	atagttataa	tgttaatatg	gttaataacta	ataatgatat	tccaataagt	4440
ggtaaaaatg	gtacctatag	tggtatagat	ttaattaatg	attcgttgaa	tagtaataat	4500
gttgatattt	atgatgaagt	attgaaacga	aaagaaaatg	aattatttgg	gacaaatcat	4560
acgaaaaaaa	atacatcaac	caatagtgtt	gcaaaaagaat	tatgtggtga	tccaattatg	4620
aaccaattag	atttgttaca	taaatgggtta	gatagacata	gagatatgtg	tgagaagtgg	4680
aataataaag	aggaagtatt	agataaatta	aaagaagaat	ggaataaaga	taacaatagt	4740
ggtaatatata	accctagtgg	taatattaac	cctagtggta	atactccacc	aactagtgc	4800
atacctagtg	gtaaaactaag	tgatacacct	agtgataaca	acatacctag	tagtaacaaa	4860
acgttgaaata	ctgatgtttc	tatacaaaata	catatggata	atcctaaacc	tataaatcaa	4920
tttactaata	tggtacttat	attggaggat	ctggaaaaat	ataatgaacc	tttaattgat	4980
gtacaagatg	atatttatta	tgatgtacat	gatcatgatg	tatcaactgc	gggtagta	5040
gctatggatg	tacctagtta	agtacaaatt	gaaatggata	taaataactaa	attggtgaaa	5100
gaaaaatatc	ctatatcgga	tgtgtgggat	atataa			5136

&lt;210&gt; 212

&lt;211&gt; 1005

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 212

atgatgttga	attacactaa	tatatgttta	ttttaccttt	cattaaatat	attgtcatca	60
tcacagaag	tatataatca	aaggaacat	tacatcacac	gtacaccaa	agcaaccact	120
aggacattat	gcgaatgtga	attgtatgca	ccatcaaact	atgataatga	cccagaaatg	180
caaaaagtaa	tggaataa	caatcgacaa	acgtcacagc	gttttgaaga	atacaatgaa	240
cgtgtgatca	aaaacagaca	aaaatgtaag	gaacaatgcg	ataaagaaat	acaaaaaatt	300
atattaaaag	ataaattaga	aaaagaatta	atgaacaaat	ttgccacatt	acaaactgat	360
atacaaaagc	atgctattcc	cacatgtggt	tgcaaaaat	cagtcgcaga	taaagttgaa	420
aaaacctggt	taaaatgtgg	agggtgtgtg	ggaagtggta	ttgcgcgaag	cgttggtttg	480
ttaggtacgg	ttgccataga	tcagtggaca	aatgctgcct	tgcttgatgc	agctcaaaag	540
ggtattcagg	caggtattga	tactgttgtt	gcggaattag	aatatgtggc	ggagagattt	600
gatgatattg	gtattaatat	agtaggaatg	ataaataaag	aaacttaccg	ttgtccgcaa	660
gctttgattg	aatctattta	tgacagcaaaa	caaaaagtgt	gtgataatgt	tggaatcca	720
gcaccaactt	gccatagagt	aggacaagac	ggcacctcaa	tttggtttcg	tccagaagta	780



ttaaaggcta	cgcaagatgg	tattgacgct	gctgaaactg	ttgaaaaagc	tgaaatagtc	840
ttgataaatg	aagaaagtgc	acatttgtac	agtgcattg	gttactccgt	ccttgccata	900
ttaattatag	ttttggttat	gttaattatt	tatttaattt	tacgttatcg	acgaaaaaag	960
aaaatgaaga	aaaaactcca	atacataaaa	ctattagaag	aatag		1005

&lt;210&gt; 213

&lt;211&gt; 1323

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 213

atgaaacgca	aaaaaaaaaa	aaaaaatata	catgtatata	catatatatt	gcattttatat	60
atacctatat	atccatatat	gcacaaacct	acttgatatac	ctacttacat	atataccaat	120
acatatatat	taatatattat	atataggaaa	aaacccaata	ttacgtctgg	acgtacaaat	180
ctttttcgtg	tcattgatat	acctcaaaac	gattatgaca	tgtctacaac	gaaatcatca	240
aataggatg	tcccgtatga	aagtcacaaa	tataaaggaa	aaacatatat	ttacatggaa	300
ggagaagaaa	cggacgatta	cagttatatt	cgtgacatat	cttccctctga	tattacatct	360
tcgtcagaga	gcgaatatga	agaattggat	atcaatgata	tatatgtacc	aagtccttca	420
aaatataaaa	cgttgattga	attagtacta	gaaccttcaa	aaagggatag	atttaataca	480
ccaagtgggtg	acacattcac	caataaattt	agagatgatg	aatggaacca	actgaaacag	540
gatttttattg	aacaatattt	acaaaacata	caaaaggatt	ttattttaca	tgatagtatg	600
gatgaaaaac	cttttattac	tcaaattccag	gatagatttc	ttgatagtag	tcatagaagaa	660
gtttattata	atattgattg	gaatgttcct	gaaaatatta	atagaattaa	taatatcatg	720
catgatataca	aatactgctc	aaataattta	tatactggta	cagatttaaat	taatgattca	780
ttaaatggta	accaatatat	tgatatatat	gatgagatgc	tgaaacgaaa	agaaaacgaa	840
ttatttggaa	catatcatat	aaaatatata	acctttaaca	gtgtttctaa	acaaacacct	900
agtgacccga	taattaacca	actatattta	tatcataaat	ggatagacaa	gcataagatg	960
atttgcgaa	agtggaaaa	caaagaggat	atgttatata	aatcgaatga	agtgtggaat	1020
atggaacgta	aggaatatct	attggatata	caaccatcaa	ctctggatga	tattcataaa	1080
attaatgatg	aaacatatata	tatttagtag	acaaataata	tatatgatca	tccctcacag	1140
gaaaccccc	tccaactact	tggatcaaca	aattattatac	ccagttatat	taccacggaa	1200
caaaataatg	gattgcgac	aaatatatct	atgtatacat	atattgatga	aacaaataat	1260
aataatgtgg	tagccactag	tataataggt	gacgatcaga	tggaataatc	gtacaattgt	1320
tga						1323

&lt;210&gt; 214

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 214

atgaaaatgt	attatcttaa	aatgttattg	tttacctttt	taataaatat	attagtagca	60
cgacattatg	aaaattttgt	aaataaccat	tataatgtaa	gtctcattca	aaacaagacc	120
aaaagagtaa	ctataaaatc	aagactttta	gcacaaaccc	aaatccacaa	tccgcattat	180
cataatgatc	cagaactcaa	agagataatt	gataaaatga	acgaggaagc	aatcaaaaaa	240
taccaacaaa	ctcatgatcc	atataaacaa	ttgaaagaag	tagtagaaaa	gaatggatca	300
caaaatagaa	gtggacatgt	tgcagaacct	atgtcgacgc	tagaaaaaga	attattggaa	360
acatatgtag	aaacatttgg	tgaagaaagt	aattattatg	taaaatcagg	taggtacca	420
aatgggtgatg	acgtatcaga	tgattcatct	tcatgtgact	gtactgatat	taataatgag	480
aaactagaaa	aaacaaaagg	aagagataag	tatttaaaac	atttgaaagg	gagatgtacc	540
cgtgggtatat	atttttgttc	agctggtagt	gcactcctaa	cattgatagc	tctgatagct	600
gcaaaaaaag	ctgccttaag	tgctgttgct	tcatatgcag	gatttaaaaa	ttgtatgtcc	660
tctattgcaa	catttaaact	acttgatagt	tcaactttac	tttcatcttt	tctatcaatg	720
aaagcatgtg	ttgttggtgc	tactgatatg	gcaggaacta	ttgcaacacc	tgctatggcc	780
gcatttttacc	cttatgggtat	tgctgccttg	gttctactta	tattagctgt	tgtacttata	840
atcttatata	tatggttgta	tagaagaagg	aaacattcgt	ggaaacatga	atgcaagaaa	900
catttatgta	agtaa					915

&lt;210&gt; 215

&lt;211&gt; 1113

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 215

atgaaagtcc	attatatata	tatattattg	tttgctcttc	cattaaatat	attggaacat	60
aataaaaaatg	aaccacacac	cacaccacat	catccaccaa	ataccaggct	attatgcgaa	120
tgtgaattat	attcacctgc	caactatgat	agtgatcccg	aatgaaaag	ggtaaatgcaa	180

caatttgtgg	atcgtaacaac	acaacgattt	cacgaatatg	atgaaaggat	gaaaactaca	240
cgccaaaaat	gtaaggataa	atgtgacaaa	gaaattcaaa	atattatatt	aaaagataaa	300
ttagaaaaac	aaatggaaca	acaattaacc	acattagaaa	caaagataga	taccaatgat	360
ataccacat	gtgtttgcca	aaagtcgtta	gcagataaaa	cagaaaaatt	ttgtctgaac	420
tgtgggtg	aactaggagg	tgggtgtgtg	caagcttcgg	gtttattagg	aggaattggg	480
caacttgggc	tagatgcatg	gaaagcagcc	gcgttggtta	ctgctaagga	acttgccgaa	540
aaagccggtg	cagctaagg	tttggctgaa	ggtaatgccc	atgggtatgaa	aatagttatt	600
catcatttaa	aagaattgca	tatagataaa	ttagttcctg	gaatatgcga	aaaaatttct	660
agtacaggcc	attatgctaa	tattacaaat	tttgcataa	ctattattca	acaacgtggg	720
acgatgtgtg	gggcgtcggg	gaaaaatcct	ggtaaggata	tgtgcacaaa	aattagtatt	780
aagttaggta	cacttaaacc	agatgggtatt	agaccagggtc	ttccagacaa	ggatgctgta	840
acaaaagtgt	taaacggact	tgttgaacaa	gctgataaag	ctgctgctca	cgttaccaag	900
actactagt	aaagtgttac	tgctgcaata	aaagctcgag	agaccgcttt	gatagaaggt	960
agatttgaaa	gttccattac	ttctataaat	gcttcgatta	ttgcaattat	agtaatatgt	1020
ttaattatgg	taattattta	tttaatttta	cgttatagac	gaaaaaaaaa	aatgaagaaa	1080
aaactccaat	atatcaaatt	attagaagaa	tag			1113

&lt;210&gt; 216

&lt;211&gt; 1128

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 216

atgaaactgt	actactctaa	aatattatta	ttttccctta	tattaaatat	tttgggtgcca	60
tcatcatatg	cacataataa	aaataaacia	tacatctcag	cacgtacacc	aactattaca	120
tcacgaatgt	taagtgaatg	tgacataaat	acgtcaattt	atgatgatga	tactgaaatg	180
aaatttgtga	aggaaaattt	cgatagacaa	acgtcgcaac	gttttgaaga	atacaatgaa	240
cgcttgctcg	aaaacaaaaca	aaaatgtaaa	gaaaaatgcg	ataaagaaat	tcaaaaaatt	300
attttaaaag	acaaattaga	aaaagaatta	atggacaaat	ttgctacatt	acaaacagat	360
atacaaaatg	atgctattcc	cacatgtgtt	tgcgaaaagt	cgtagcaga	taaaacagaa	420
aaattttgtc	tgaactgtgg	gggtgcaacta	ggaggtgggtg	tggttgcaagc	ttccgggttta	480
ttaggaggaa	ttgggtgcagt	tgctgtaaat	gcctggaaaag	atgcggcact	tgaggccgcc	540
attgattttg	ctactgaagc	gggtgctgcg	gccgtgttag	ctgctgggtga	agctgcaggt	600
aaggccgtag	ttattaaatc	attaaaatat	tttcgtgtag	atgttttctt	tcctaaaaat	660
tttaattcca	ttggtaatgc	gataccttat	tatgatgcca	aaacgattgg	tgctgctatt	720
gctgaaaaac	atgctcagaa	ctgtgcgctg	gtgtccacta	atgagggtgc	tatgtgctat	780
ccatttgaag	tttaatttagg	tatacgtgag	gcaataaactt	ttacacaaac	tggtcctcca	840
gcgaaatacy	ctataaccaga	cacggtaagc	gaaattgttg	aaggagctga	acaagctgct	900
aaagcagccg	ctaaggctgc	tgaaaaaggt	gttactgctg	caataaaaagc	taaagagacc	960
cgtttgttag	aagctggatt	taatagttcc	attagttcta	taaatgcttc	tattattgca	1020
atagtcgtaa	taattttaat	tatggtaatc	atatatttaa	ttttacgtta	tagaagaaaa	1080
aaaagaatga	agaaaaaaca	ccaatatata	aaactattag	aagaatag		1128

&lt;210&gt; 217

&lt;211&gt; 993

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 217

atgaaagacc	attatatttaa	tatattattg	tttgccttct	cattaaatat	attgggtatat	60
aatcaaaagga	gctattacat	tacaccacgt	catacagaaa	ccaacagatc	tttatgtgaa	120
tgtgaattat	attcacctac	gaactatgat	agtgatccag	aaatgaaaag	ggtgatgcaa	180
caatttggagg	atcgtaacat	acaaagattt	cacgaatatg	aagaacgtat	gcaaagtaaa	240
cgaatgcaat	gtaaagaaca	gtgtgataaa	gaaatacaaa	aaattatatt	aaaagataaa	300
ttagaaaaag	aattaatgga	caaatttgac	acactacaca	cagatatata	aagtgatgct	360
attccaacat	gtgtttgcca	aaaatcctta	gcagataaag	tggaaaaagg	ttgtttacga	420
tgtgggtatg	gtctaggaac	tgttgcacca	acggttggat	taattgggtg	aatagctgta	480
aatgagtggg	caaaagctgc	tactgcagcg	gcaactcaaa	aggggtattga	ggcaggtatt	540
aatgtagtaa	tagatacatt	aaaaagatta	ttcaacatag	aggttagtaac	agatcttaaa	600
tggaaaaacac	tcattactgc	acaaaattat	actgataaga	ttcttggttg	tgatgttatt	660
aggaaattag	gtaatacact	ttgcgggggt	tctgaagata	cagcaggtgg	attttgtctt	720
ttcacagttta	aagccaatac	ccttcctcaa	gcaataaatg	gacatgttac	aaaagctatt	780
tgcgaaggta	ctgcagaagt	tgtaaaagtt	acggaagcag	agatggggaa	ggtaacaaca	840
tcagctggtg	cttattctac	tggataataa	gtctcagttg	ttgcaatagt	ggtcatagtt	900
tttaattatga	taataatata	tttgatttta	cgttatcgac	gaaaaagaaa	aatgacaaaa	960
aaaaatgcaat	ttatgaaatt	attaacgaa	tag			993

<210> 218  
 <211> 747  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 218  
 atgaaacgca aaaaaaaaaa aaaaaatata catgtatata catatatatt gcattttatat 60  
 atacctatat atccatatat gcacaaacct acttgtatac atacttacat atataccaat 120  
 acatatatat taatatattat atataggaaa aaacccaata ttacgtctgg acgtacaaat 180  
 ctttttcgtg tcattgatat acctcaaaat gattatgaca tacctacaac aaaatcatca 240  
 aatagggtatg tcccatatga aagtgaccgt tatgttggca aaacatatat ttacgtggaa 300  
 ggagaagaaa cggacgatta cagtttatatt cgtgatatat attcctctga tattacttct 360  
 tcatcagaaa gtgagtatga agagatagat ttaaagtata tatatgtatc gggtagtcca 420  
 aaatataaaa tgtttatcga agtagtacta gaaccattaa atagggatagc atttaattta 480  
 tcaagtggta acacatctac caataaactt acagataatg aatggaatca atggaaacag 540  
 gattttattg aacaatattt aactcatata ggatctgctg taccattata catgagttac 600  
 aaactgataa tatgtatatg tatacccaaa ctaatatattt acatgttatt atggatgaaa 660  
 aaccttttat tacatcaata taagatagat ttcttggtag tggatcatcaa taagttactt 720  
 ataattattga ttggaatatt cgaataa 747

<210> 219  
 <211> 519  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 219  
 atgaacgagg aagcaatcaa aaaataccaa caaactcatg atccatatga acaattgaaa 60  
 gatgtagtag aaaaaaatgg aagaaaaatat acaagtgga aatgggtgcaga acccatgtca 120  
 acgatagaaa aagatttatt ggaaacatat gaagaaatgt ttggtgacga aagtaatacg 180  
 ttgaagtcag gcatgagtc aaatgttgat gaaaaatctt cagcatgtga atgtgctgat 240  
 attaataata taaaactagg aaaaacaaaa ggaagagata agtatttaaa aactttaaaa 300  
 gggagatgta cgcgtggtat atatatttct tcacttacta ctgtaatctt aacaacgac 360  
 gctttgtatg ctgcaagagc tgctgccatt gctacctta gagaacctta tagtgctgt 420  
 gcagcctttg tttctatatt taacatgctt agtagggaaa ctgtgatcga gctattcaaa 480  
 caggcactgg aatatgtgca tctggtgctg ctgatttag 519

<210> 220  
 <211> 939  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 220  
 atgaaactga actacactaa aatattatta tttttctttc cattaaatat attagcaaatt 60  
 aataataaaa ataaaccatc catcacacaa cgtcatacac caagatatac atcacgagta 120  
 ttaagcgaat gtgacatccg atcgtaatt tatgataatg atgcggagat gaaatcagtg 180  
 aaggaaactt tcgatcgaca aacatcacaa cgttttgaag aatacgaaga acgtatgaaa 240  
 ggtaaacgcc aaaaacgtaa agaacaacgt gacaaaaata tacaagaaat tattgaaaaa 300  
 gatagaatgg acaaatcatt agcagaaaaa gtagaaaaag tttgtcttag gtgtgggttt 360  
 gggttaggag gtgttcagc aggtgttggg atatttgggtg caattgctgt aaatgaatgg 420  
 acaaaagctg ctttggttgc tgcagctcaa aaggggtattg atgcaggtat caaatcagcc 480  
 cttaaaggat tagaaaaaat atatgaacta agtgattttt cttattttaa atggctctgca 540  
 atggttactc caacaactta tgatcaacct atggatctta ttgctattgt aactaaagca 600  
 tataatatgt gtgatgacgt tgaggctgct aagggatctt tattttgtca ggccatggaa 660  
 ggtatagcta atgaacctga tggatgtcct gttaaaacct tttctcaaat ggctgtagac 720  
 gctgcagaag cagctggtaa agtttctaaa actaccgaag aagctggaat agccttagca 780  
 aataatacaa gttacaattc gtacattgca attgcttact ccgtgactgc tatactgatt 840  
 atagttttta ttatgttaat tattttattt attttacgtt atcgtagaaa aaaaaaatg 900  
 aataaaaaac tacaatacac aaaattatta aatcaataa 939

<210> 221  
 <211> 1071  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 221  
 atgaaagtc attatattaa tatattattg tttacacttc cattaaatat attggtaaatt 60  
 ggtcaagggc actatagtag cactaaacat cctatatcaa gcacaaaatc ctcaaaatc 120

```

catagatcat tatgccaatg cgaaatatat acgtccattt atgataacga tccggaaatg 180
aaaaaagtaa tgcaagattt cgatcaacaa acctcacaac gattacgcga atatgacgaa 240
cgtttgataa aaaacagaca aaaatgtaaa gatcaatgtg ataaagatat tcagaaaatt 300
attttaaaag ataaaattga aaaagaatta acaaaacaat tggaggcatt agaagttgat 360
ataactacgg aggatatacc cgcttggtgt tgcaaaaagt ccgtagaaga caaagtgggg 420
aaaaattggt tgaaatgcgg aggaatatta ggtggtggtt ttccaggatt ggggggttta 480
ggagcttatg ctgtaaatag tatggtacaa gttgctatgg atgctgctaa gaaagcggct 540
atagctgaag gtgctgaagc cggtattgct gaaggtatta aggtagccat tcaaggagta 600
ccaaaaaaat tcttattata cactttaaat ggtaaagaat tacaagcagt tattaatgca 660
aataattttc agaatccttc ttttttttat ggtgaaatca tggcggaaata tgtttcatgg 720
aaaaaatctg atatggttaa ctcttatggt cttttttctt ttattgaaga aagctgtgaa 780
aataatcccg ataagattat gaaattcata ttagcaaaact caaatgatat tgcaaaagat 840
gctggtaaag cagctaccaa aatgactact caaactactg aagctcttac actgaagaag 900
actgctgagg caacaagtac atcagctatt ttttctaate ctatagttat tagctttatt 960
gtactagtaa ttatagttct tatactttta attatttatt taattttacg atatcgaaga 1020
aaaaggaaaa tgaagaaaaa actccaatat ttaaaattat taaaagaata a 1071

```

&lt;210&gt; 222

&lt;211&gt; 873

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 222

```

atgaagatgt attatcttaa aatggtattg tttacctttt taataaatac attagtcctc 60
atacaaaaaca acacacaaaag aacaacgata aattcacgat tattagcaca aacacaaaat 120
aaaaatccac attatcataa tgaccagaa ctaaaagaaa taattgacaa attgaacgag 180
gaagcaataa aaaaatacca acaaaactcat gatccatatg aacaattgaa agatgtagta 240
gaaaaaaatg gaacaaaaca tgtaggtgga catgtttctg aacctatgtc aacgatagaa 300
aaagaattat tggaaacata tgaagacggt tttggtgaca aaaatcatgt tatgttaaaa 360
tcgggtaggt acccaaatga tgatgacaaa tcagatgatt catcttcatg tgaatgtact 420
gatgttaata atacgaaatt agaaaaaaca aaaggaaaag ataagtattt aaaaacttta 480
aaacacagat gtataggtgg aatatgttct tgctccgttg gtagtgcgtt ccttacaatt 540
ttaggttgtg catttgcaaa atctgctgcc ctactgcct ttgcttcttc agaaagcact 600
aaaacttgta tatcctctgt tgcaatatat aattttattc agaattcaac tatgctttca 660
gctcttaaaa cagttggtgg aacctgtgca aatggtgctc ctgatatagc aggaactggt 720
tcaacgcttg ctacgcccgc atttccccct tatggtattg cggccttggt tctacttata 780
ttagctgttg cacttataat attatatata tggttgtata gaaggagaaa aaattcatgg 840
aaacatgaat gcaagaaaca tttatgtaga taa 873

```

&lt;210&gt; 223

&lt;211&gt; 471

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 223

```

atgtcttgta attatatcaa attatctttg ttctctattg tactatgtat ttttataatt 60
acacataagt tatgtcttga aaaaatacct cataataaaa gaaatacggg tgatatttta 120
aatgcaagac ataagagatt actatccgaa tcagaagacg aatatatatt taagacacat 180
tcgggagaaa attcatcgac acaaccaata gataataaat cacatgaaa tattacagaa 240
tatcataaaa catcatcttc attcagatta aatgaggaat atccacaaaa tcataattat 300
gaatcagaac aaataaaatg ggaaaatgaa aaaaataata aattattggt acagaaatta 360
cgtaagaaat cacattacag aaatattaaa ataattttta taacagcttt atctatgatg 420
gaattcccag ttcttccgat gctttatate aaatattaca tacataaata g 471

```

&lt;210&gt; 224

&lt;211&gt; 765

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 224

```

atgagaagtt taaagtcttg cttttttaaa cataattgga acatatgttt attatggata 60
agagtgtatt taagtagttc ctttttaata tcttttaatat tttataacaa tgtttttaat 120
tgtaaaatta aatatggaaa agtcataca gaagattctt tcaatttaat aaaactgaga 180
agcttatctg aatataataa aaattacgat ggagaatatt atgatattat aaaattaaat 240
atagataatg ataagttaaa acaatgtgca atgaggattc atcctgaagt tgaattgatt 300
ggaaaggagt ctgaatgttt tggggaaaac atgaatgaag tatatataaa acttataact 360
gatttaaaac ctgatttgat taatgtaaat gcaacaagta aaaaggaatt gctaaatgaa 420

```

tgggatttta	ttatgaataa	ttttaatgga	aagaatgttg	aaaaaatcgt	tgaataaag	480
gatgaaacaa	atgatgaaac	agacaatgaa	acaaatgatg	aaacagacaa	tgaacaaat	540
gatgaaaaaa	gtataaaaaa	gaagaaaaaa	aaaagaaaag	gaaaacctag	gataagatat	600
attgcagaga	tgggttgata	tgggtactata	tgcatagctg	gtgctcctgt	tatattaact	660
ctcattattg	ttggagggtt	catatggggt	gttaaaggta	caaaatatgc	aagaaaatat	720
tttaatatata	taaaaaaatt	gctttttaca	aaagtaccat	tttaa		765

&lt;210&gt; 225

&lt;211&gt; 1110

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 225

atggacacaa	aaaatatgtt	aacaaagaaa	atgaaaattg	aaaaaagtgc	atttaataag	60
tattcacatt	tattcactag	tttattcaac	tatgatttat	gggaacgatt	tgaaataagt	120
tatttatagt	tatcaggaaa	tagtgaatat	acaaatgatt	tagatcttga	aataaataag	180
aaacttgtgt	tattgaataa	tgagactaat	agtgaagtta	gaatacatat	tatttggcat	240
aatgtaatga	agagtgaaga	agaaaaattt	aattcatggt	atatgtattt	taataataat	300
ttttatcttt	taagaaaaaa	atataaaaaca	ccttttaatt	atgcaaaacc	aacgtgtaat	360
caatgtaatg	aattttttgc	attatcgaaa	aaatatattg	aaaattcatt	taataaggtt	420
tttaataaat	ggttcaaaaa	taatgtatat	ttagatgtaa	acgaatttag	ggttattgta	480
atggcctgta	gattgttatg	gagaaaaaca	ttggcaacat	taaaagaaga	gggtatgctt	540
tatctccaga	aaccgtttga	agctttgcat	catgaaagaa	aaaaaattca	taaaaggggt	600
ggacgtgctt	tgaattttaa	ggctgaagag	ttctatgaaa	aaaatcccga	tttagttact	660
tacaaaggat	gccatttttt	gaattcactt	aaaaacgtaa	atttagaaga	aaaatatgat	720
gatgatgatg	aagcagaaaa	tgaaaaaaaa	aaacaagaga	aaatcaaaga	caataaaaaa	780
gaggaggaag	atgcatatga	agataatgaa	gacaatgaag	attatgacga	ttatgacgat	840
tatgatgatt	atgatgaaga	acaatatgac	aaaaatgggg	aagttattgt	tggagcaaat	900
gaggatccat	catatgaata	taattatcat	tatgaagaac	catttatatt	aaccctgaa	960
ctcattgaag	caattgaaag	ggcagtcgaa	agagatgttg	aaagagaagt	tgagaaaaga	1020
tctgagaaat	taattgatga	taaatggaaa	aaaagacttg	caaaagaaat	aagagataaa	1080
ccaataaaaa	aagtaagatt	taatttataa				1110

&lt;210&gt; 226

&lt;211&gt; 2703

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 226

atgaaatgta	aaagaaatgt	ttttttttct	aaatcattaa	aatttggaca	cattttccgt	60
tttatatttg	gaattctata	tgggtgtaata	aataaattat	ttataagtga	tgtaaattcc	120
tgttattcag	ttagtaatat	tataatatat	gaaagacaat	taagcgaaaa	agacaactta	180
tcaaatccac	ttgaacaaaa	tggggaaacct	gtagttatag	gacaattttt	ttcattacca	240
aatggaaaat	cgattttctat	ttcagatgat	atattttattg	atgaggaaca	atcaattgtg	300
aattttattg	ataatataat	tgaaggttta	gaacaatata	tgctatggaa	taattacatg	360
gtaattccgc	atatgaaaca	gtatccccct	gttttcaata	atgataaaga	tatagaatta	420
aataataaag	ttgataattt	agaaagaaat	agagaagata	ttataattga	aacggaaaaa	480
ttgtgggttag	aaataatgaa	aaatgaaaaa	aataaatttg	cttcattaaa	gtgtaaacta	540
tttaatcaat	ataataaatt	taaaaataaa	cataatatac	caaaagaaca	atatgaaaaa	600
ggatgtaatc	tatgcaaaaa	acttattgaa	attggagaaa	agtatcttga	attgaaatta	660
aatagtgtat	tttatgaatg	gtatgataaa	aaagtatatc	gtgttgaaga	ttttaaaaga	720
aaaattgaga	gatgtcgaat	agcttggaaa	gctttatcta	acaaaattca	atatttatgc	780
aataaaatta	taatttaattg	tttagataaa	attaaatata	tgaatgaaat	gaaaataatg	840
aaagcaaaaa	aaaaagctgt	aaaagtggta	gaaaaaccag	aacctaaaaa	gaaacaagaa	900
gaaaatcttt	ctatgggtgga	agggttgaat	tgttttgaag	agaatcataa	aataatttgc	960
atcaagaata	atgatttaat	tagtgggtgt	gaaaatgtag	ataccaagg	atgtccttca	1020
gtaaatgaaa	ttattaatat	ttcgtctata	aattattatg	aaaaaatgag	ggatgggtcta	1080
tatcatgacg	atgaagaata	tgatgcgctt	gttacagatg	atgacttgat	atttgaaattg	1140
tttgatgaaa	ataaagaaga	tgatataata	gaagagcttg	aaaataatga	atcagatgaa	1200
gatgatttgt	tagtgggaaga	atctgaaagt	aatgaatcag	atgaagatga	tttgttagt	1260
gaagaatatg	aaaataatga	atcagatgaa	gatgaatcta	taatagaaga	atatggagaa	1320
gcacaagaag	aagttgcaat	aagttcctct	gaggtagttg	atgatgaatt	tacaacaaac	1380
gaagatatag	aatcagaaga	aaggatttct	ttggataagg	aagcaaatag	attattattt	1440
aaaaatgaca	tatataacat	ttggttttct	gctttatcaa	atatatatgt	cgatacaaca	1500
tactatgata	tattaaacgt	atatectact	tctgaattga	gtgaaattta	aagtaattat	1560
tataatttag	cttttaaaata	taatccagaa	agtaatttag	gtaatgctga	agcattaaca	1620
aaatttaggg	atataaatga	agcatatcaa	atattatctt	tagaccaaag	aaggatgaat	1680
tataataaat	atggattaaa	tgctacaaaa	gatatgtttt	taatagatcc	ttctatattt	1740

tatgtgaaaa	tgttaagtat	agaaaagttt	tatgattata	ttggaactac	gcaaatagaa	1800
tcattttctaa	aagtattatc	tgaaaaaaat	atagctttgc	atgaattaga	acatagactt	1860
gaagacatta	tgaatttgat	gtatgagcaa	caagaagtac	gacaagttaa	aatagcctta	1920
tatttaagaa	ataaattaca	gccatattga	gatggagatg	accaatggaa	aaaacatatg	1980
gaagaagaag	tgaaaaaatt	aaataaatcc	atattttggt	cttttttttt	aaaatccata	2040
ggatggatat	atacaaatct	tactcaatgt	tatcgggaag	ataatggaca	ttcgttttga	2100
gtaaacttaa	aattggctaa	catggaattc	gaaaacagga	ataaaaaaaa	tcaactaaaa	2160
gtatcaaaat	ctatgaggaa	cttgtttgtc	ataattaagg	aatatatacc	taggaatgaa	2220
aacataactg	gtcttggtta	aaagatagaa	tatttgaaga	gcgaaaatga	tattgaaaaat	2280
aatataagca	atgttaatga	aaaatcttct	agtaatgata	attcaagtga	tgatgaaaat	2340
caaaatgaaa	atgaaaatga	aaatcaaaat	gaaaatgaaa	atgagaatga	aaatcgtaaa	2400
gatcttaagc	tactaagcga	taacgaaaag	agaaaagttt	tacattttat	gataaagaat	2460
ataaaaaatg	tagttcaggg	tgatattgaa	ctaacaatta	gatatgctgc	tgaaaaagtt	2520
ttatttgatg	aagggtgtag	taaggaaaac	caattaaaaa	gagttgaggc	attggaaatt	2580
ttaggaaaata	taatgaaaac	gtgttcaaaa	gaaaataaaa	attgggaaaa	ggatcaggaa	2640
gctgatattg	aaaatattat	tgaaaaagta	ataaatgttt	caaaaatggt	taataatgaa	2700
tga						2703

&lt;210&gt; 227

&lt;211&gt; 1065

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 227

atgttaattt	gtatcgttta	ttataatttt	aggaaaagtt	ccaagatcaa	attcagacga	60
gattattatt	ccatattagg	tgtagtaga	gattgtacga	atgaagacat	aaagaaagca	120
tataaaaaat	tagctatgaa	gtggcaccct	gataaacact	taaatgcagc	atcaaaaaaa	180
gaagctgata	atatgtttta	aagtatttct	gaagcttacg	aagttttatc	agatgaagaa	240
aagagagata	tatatgataa	gtatggtgaa	gaaggattag	ataaatatgg	ttctaataat	300
ggacattcca	aaggttttta	aaggactgat	ccaaatgacg	tttttagtaa	attttttaaa	360
acagaaacaa	aattttattc	taattcacct	tcatcaccaa	atggaaatgt	actctttgaa	420
ggttcattat	ttggaggatc	atctccgttt	agtgggtata	acccaagaag	tggttcagga	480
tatactactt	caaaaagttt	tagtagcatg	gacaaagtcg	aagaatatgt	tgtaccactt	540
tacgtaacac	tagaagattt	atataatgga	actcagaaaa	aattaaaagt	aacaagaaaa	600
agatgtcaag	gagtaacaac	atatgatgat	gaattttttg	taactgttga	tataaaatct	660
ggatgggtgtg	atggtacgac	aattacgtat	aaaggagaag	gtgaccaaac	aagtcctatg	720
tcaaattccag	gagatttagt	ttttacgata	aaaacagtag	atcatgatcg	ttttgtaaga	780
agttataatg	atttgatata	taggtgtcct	ataactttag	aacaagcttt	aacaggtcat	840
aaattttaca	ttataacctt	agataataga	gatatgtgata	ttcaagttag	tgaaattggt	900
acgcctctta	ctacaagagt	tattactagt	gaagggaatgc	catatatgga	aaatccaaaa	960
atgaaaggaa	atgttgattat	tgaatttgat	ataatatttc	caaaaaagct	aagtgatgaa	1020
cagaaagaac	ttataaaaga	agcattagga	ggaaatggtt	tttaa		1065

&lt;210&gt; 228

&lt;211&gt; 7326

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 228

atggcaacaa	taaaaaaata	ccatataaga	ggaaggaaaa	atattttta	ttttttactt	60
aaaatatatt	tgttttctcc	tttaatatgg	atactaattt	attctgaata	ttttacggtt	120
gttaagaatt	ataataaaat	tgacaatgtg	tataatatat	ttgaaataag	acttaaaaga	180
tcattagccc	aggttttggg	gaatacaagg	ttaagcagtc	gtggagtaag	ggatcctaga	240
actaaggagg	cattaaaaaga	aaagcagttc	agggatcata	aaagaaaaaga	ggcttttaaaa	300
cagaaaactg	aaaaaaatga	aaaagcaaga	aatgctttta	aggaaaagaa	gttaaaaagaa	360
caaaaaaaga	atgacgcgca	gaaagcaaaa	gatttaacaa	aaaaggaaag	ccaagactct	420
tcaagtgaaa	aatcactaaa	ggaaaaagta	aatggagaag	cattaaaagga	aaaagaaaat	480
aaagaaacat	taaaaaaaaa	agagtttaga	aatcagaagg	aaaaagaaga	aaaaaataaa	540
ataaaagata	ataatgatga	agcattaaag	aataaaggaa	atgataaaga	tgataaaaaa	600
atagttccca	aaaaaaccaga	atccgtagaa	aaggatttga	aagaaatgga	attgaaagag	660
aaggaattta	taaaacaaca	tttaaaggat	tatgaggaga	gaaaggaaaa	aagaagaaat	720
tgataactaa	gaagtttaag	aagagataaa	ttaagagaaa	ttgaacaatt	agaaaagtta	780
aatgctcaat	tagaagtgac	tataaatgaa	ctaaaagaaa	ggagagcttc	aagaagacct	840
atgatggtta	aaatgcaacg	tggaatgaaa	gatgaagttg	atgaatggat	taaaaaatat	900
gatgatgaac	aagcagaaaa	gaatggtacg	aaagatgaag	aaattaaaga	taaaggtgat	960
ggttatgaag	aaattgttga	aaccaaattt	tatggtatga	gagaaaatgc	acttgagaga	1020
ttagatgaat	atgaagaaag	atatgaaaaa	aaacgttatt	atttaaaaga	agatggagag	1080
ggtgatttaa	aagatgttga	agaaaaatta	gaagaaactg	gttatggttt	tagggaaaaa	1140

tttctacaa	ccaggatatt	gggtaaaaga	aagagaaata	aagaacaaaa	aaaaattaaag	1200
gaagacaaag	aaaaaaaatt	aattgctgct	gaagaaccag	acgatgagaa	aaaaattaa	1260
ttaaaagatt	ctgatgataa	agttgtggtt	cccgtgaata	aaaataaatc	atcgtttctt	1320
gataaattta	gagctccaga	taaaaagaga	acgatgtttt	atagactaag	tgaattgttt	1380
cctattgtac	caagaaaaga	taatgagctt	gctgtgtctg	gtgattgtat	ggattcaaa	1440
gtaaattggaa	aaaaattgaa	atcaactttc	aatccgttta	aaagaagacg	taataaacta	1500
aaggagagaa	aaatgcagga	attacacaag	tttaaaaaaa	attataaaaa	atatcaaaag	1560
ttgttagaaa	gggaaaagag	agaaaatcca	gatggtgaac	ctttgaatac	accagaaata	1620
catgtttata	ggccttcaga	tttaattggat	aaaggagaaa	ataaatcagc	aggctcatcca	1680
tttaaatatc	aaccaacaaa	aggattaaag	gaatacgaag	aaagtcattg	cgctaaagat	1740
tatcaattag	aacatgaacc	accaaccaaa	ttacctgaat	acgaaaaagg	tcattgtgtct	1800
agggaaatc	aacttgataa	tgaagtacga	gatgaattac	ctgaatatga	aaaggggtcat	1860
gtatctagag	aataatcaact	tgataatgaa	gtacgagatg	aattacctga	atatgaaaag	1920
ggtcattgtat	ctagagaata	tcaacttgat	aatgaagggtc	catctacatt	aaaggaatat	1980
gatcaaacag	aattagcaaa	aggtaaagat	ataactaaca	aaccacatga	atccggttgat	2040
gaatatgatc	aatcagaatt	agcaaaagggt	aaagatataa	ctaacaaacc	acatgaatcc	2100
gttgatgaat	atgatcaaac	agaattagca	aaaggtaagg	aagtaactaa	taaaccacac	2160
gaaaatctgg	aagaatacaa	tgaaactgat	ttagcaaaag	gtaaggagggt	aactaacaaa	2220
ccacatgaat	ccgttgatga	atatgatcaa	tcagaattag	caaaaggtaa	agatataact	2280
aacaaaccac	acgaatccgt	tgatgaatat	gatcaaacag	aattagccaa	aggtaaggaa	2340
gtaactaata	aaccacacga	aaatctggaa	gaatataatg	aaaccgattt	agcaaaagggt	2400
aagggaagtaa	ctaataaagc	gcatgaaaat	ctggaagaat	ataatgaaac	cgatttagca	2460
aaaggtaagg	aagtaactaa	taaagcgcat	gaaaatctgg	aagaatataa	tgaaccgat	2520
ttagcaaaaag	gtaagggaagt	aactaataaa	gcgcattgaaa	atctagaaga	atataatgaa	2580
actgatttag	caaaaggtaa	ggaagtaact	aataaagcac	gcgaaaatct	agaagaatat	2640
aatgaaactg	atttagcaaa	aggtaaggaa	gtaactaata	aagcacgcga	aatctagaa	2700
gaatataatg	aaactgattt	agcaaaagggt	aaggaagtaa	ctaataaagc	gcatgaaaat	2760
ctggaagaat	ataatgaaac	cgatttagca	aaaggtaagg	aagtaactaa	taaagcgcat	2820
gaaaatctag	aagaatataa	tgaaactgat	ttagcaaaaag	gtaagggaagt	aactaataaa	2880
gcacatgaaa	atctagaaga	atataatgaa	actgatttag	caaaaggtaa	ggaagtaact	2940
aataaagcac	gcgaaaatct	agaagaatat	aatgaaactg	atttagcaaa	aggtaaggaa	3000
gtaactaata	aagcacgcga	aaatctagaa	gaatataatg	aaactgattt	agcaaaagggt	3060
aagggaagtaa	ctaataaagc	acgcgaaaat	ctagaagaat	ataatgaaac	tgatttagca	3120
aaaggtaagg	aagtaactaa	taaagcacgc	gaaaatctag	aagaatatga	agaaaaagat	3180
tatatgaaaa	ataatgaatt	acaaaaataa	ggatctgatg	gattaaaaga	aaatgcagag	3240
ctaaaaaata	aagaattacg	aaataaagga	tctgatggat	taaaagaaaa	tgacagagcta	3300
aaaaataaag	aattacgaaa	taaaggatct	gtatggattaa	aagaaaaatgc	agaattaaaa	3360
aataaagagt	tacaaaaata	aggatcggaa	ggattaaaag	aaaatgcaga	attaaaaaat	3420
aaagagttac	aaaaataaag	atcggaaagga	ttaaaagaaa	atgcagaatt	aaaaaataaa	3480
gaattacgaa	ataaaggatc	tgaaaggatta	aaagaaaatg	cagagctaaa	aaataaagaa	3540
ttacaaaata	aaggatctga	aggattaaaa	gaaaatgcag	aattaaaaaa	taaagagtta	3600
caaaaataaag	gatcggaaag	attaaaagaa	aatgcagaat	taaaaaataa	agagttacaa	3660
aataaaggat	cggaaggatt	aaaagaaaat	gcagaattaa	aaaataaaga	attacgaaat	3720
aaaggatctg	aaggattaaa	agaaaatgta	tatacaaaata	atgattttaa	gaataacgat	3780
attcaaaaata	aagattttatc	taataaagac	atgaaaaata	aagaactatt	aaacaaagat	3840
atttctaata	aagacatgaa	gaataaagaa	ctattaaata	aagacttgct	caatgaagac	3900
atgaagaata	aagaactatt	aaataaagac	ataaggaata	aggacttgaa	aagtatagga	3960
aacatggaac	aacaaaatac	tggttttaaag	aatacaccta	gtaaaggaca	acaaaatact	4020
ggttttaaaga	atacacctaa	tgaaagacaa	caaaatactg	gtttaaagaa	tacacctagt	4080
gaaggacaac	aaaatacggg	tttaagaat	acacctagt	aaggacaaca	aaatactggt	4140
ttaaagaata	cacctaatga	aagacaacaa	aatactggtt	taaagaatac	acctagttaa	4200
ggacaacaaa	atacgggttt	aaagaataca	cctattgaag	gacaacaaaa	tactgggtta	4260
aagaatacac	ctagtgaagg	acaacaaaat	actggtttta	agaatacacc	taatgaaaga	4320
caacaaaata	ctggtttaaa	gaatgcggct	aataaaggac	aacaaaatac	tggtttaaag	4380
aatacaccta	gtaaaggaca	acaaaataca	ggtttaaaga	atacacctaa	tgaaagacaa	4440
caaaaatactg	gtttaaagaa	tacaccta	gaaagacaac	aaaatactgg	tttaagaat	4500
acacctagt	aaggacaaca	aaataatgat	ttaaagaata	cacctaatga	aagacaacaa	4560
aatactggtt	taaagaatac	agctagttaa	ggacaacaaa	atactggttt	aaagaatgca	4620
cctaatagaa	gacaacaaaa	tactggttta	aagaatacac	ctagtgaagg	acaacaaaat	4680
actggtttta	agaatacacc	tagtgaagga	caacaaaata	cgggttttaa	gaatacacct	4740
aatgaaagac	aacaaaatac	tggttttaaag	aatacacgta	gtaaaggaca	acaaaatact	4800
ggttttaaaga	atgcacctaa	tgaaagacaa	caaaatactg	gtttaaagaa	tacacctagt	4860
gaaggacaac	aaaatactgg	tttaagaat	tcagctagta	aaggacaaca	aaatactggt	4920
ttaaagaata	cacctagtga	aggacaacaa	aataatgatt	taaagaatgc	acctaatagaa	4980
agacaacaaa	atacgggttt	aaagaataca	cctagtgaag	gacaacaaaa	tacgggttta	5040
aagaatacac	ctagtgaagg	acaacaaaat	actggtttta	agaatacacc	tagtggagga	5100
caacaaaata	ctggtttaaa	gaatacacct	aatgaaagac	aacaaaatac	tggtttaaag	5160
aatacaccta	gtgaaggaca	acaaaatact	ggtttaaaga	atacacctaa	tgaaagacaa	5220
caaaaatactg	gtttaaagaa	tgcggtta	aaaggacaac	aaaatactgg	tttaagaat	5280
acacctaatg	aaggacaaca	aaatactggt	ttaaagaata	cacctagtga	aggacaacaa	5340



aatacgggtt	taaagaatac	acctagtga	ggacaacaaa	atactgggtt	aaagaataca	5400
cctagtgaag	gacaacaaaa	tactgggtta	aagaatacac	ctaatagaag	acaacaaaat	5460
actgggttaa	agaatgcggc	taataaagga	caacaaaata	ctgggtttaa	gaatacacct	5520
aatgaaggac	aacaaaatac	tggttttaaag	aatacaccta	gtgaaggaca	acaaaatact	5580
gggtttaaaga	atacacctag	tgaaggacaa	caaaatactg	gtttaaagaa	tacacctagt	5640
gaaggacaac	aaaatactgg	tttaaagaat	gcggctaata	aaggacaaca	aaatactggt	5700
ttaaagaata	cacctagtgg	aggacaacaa	aatactgggt	taaagaatac	acctaataga	5760
ggacaacaaa	atactgggtt	aaagaataca	cctagtgaag	gacaacaaaa	tactgggtta	5820
aagaatacac	ctagtgaagg	acaacaaaat	actgggttaa	agaatacacc	taatgaaga	5880
caacaaaata	ctgggtttaa	gaatacacct	agtgaaggac	aacaaaatac	tggtttaaag	5940
aatacaccta	gtgaaggaca	accaaatacg	gggtttaaaga	atacacctaa	tgaaggacaa	6000
caaaatactg	gtttaaagaa	tacacctagt	gaaggacaac	aaaatactgg	tttaaagaat	6060
gcggctaata	aaggacaaca	aaatactggt	ttaaagaata	cacctaataga	aggacaacaa	6120
aatactgggt	taaagaatac	acctagtga	ggacaacaaa	atactgggtt	aaagaataca	6180
cctagtgaag	gacaacaaaa	tactgggtta	aagaatacac	ctagtgaagg	acaacaaaat	6240
actgggttaa	agaatgcggc	taataaagga	caacaaaata	ctgggtttaa	gaatacacct	6300
aatgaaggac	aacaaaatac	tggttttaaag	aatacaccta	atgaaggaca	acaaaatact	6360
gggtttaaaga	atacacctag	tgaaggacaa	caaaatactg	gtttaaagaa	tacacctagt	6420
gaaggacaac	aaaatactgg	tttaaagaat	acacctagtg	aaggacaaca	aaatactggt	6480
ttaaagaata	cacctagtga	aggacaacca	aatacgggtt	taaagaatac	acctaataga	6540
ggacaacaaa	atactgggtt	aaagaataca	cctagtgaag	gacaacaaaa	tactgggtta	6600
aagaatgcgg	ctaataaagg	acaacaaaat	actgggttaa	agaatacacc	tagtgaagga	6660
caacaaaata	ctgggtttaa	gaatacacct	agtgaaggac	aacaaaatac	tggtttaaag	6720
aatgcggcta	ataaaggaca	acaaaatact	gggtttaaaga	atacacctag	tgaaggacaa	6780
caaaatactg	gtttaaagaa	tacacctagt	gaaggacaac	aaaatactgg	tttaaagaat	6840
gcggctaata	aaggacaaca	aaatactggt	ttaaagaata	cacctagtga	aggacaacca	6900
aatacgggtt	taaagaatac	acctaataga	ggacaacaaa	atactgggtt	aaagaataca	6960
cctagtgaag	gacaacaaaa	tactgggtta	aagaatacac	ctaatagaag	acaacaaaat	7020
actgggttaa	agaatacacc	tagtgaagga	caacaaaata	ctgggtttaa	gaatacacct	7080
aatgaaggac	aacaaaataa	tgattttaaag	aataaagcta	gtaaaggaca	acaaaataat	7140
gatttagaaa	acgatggctt	aaaacacaaa	ccaaacagg	gacaaaaaca	taccgaattg	7200
aataataaaa	atttataaaa	taagcctaca	gtgggttaa	aaaatgttaa	agatgacgaa	7260
ttatcagata	atgaatcgtc	tgataatgaa	aaatccaaaa	aaaatttgag	aggaaaaaaa	7320
aattaa						7326

&lt;210&gt; 229

&lt;211&gt; 1965

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 229

atgaaaagtt	ttaagaacaa	aaatactttg	aggagaaaga	aggctttccc	tggttttact	60
aaaattcttt	tagtctcttt	tttagtatgg	gttttgaaat	gctctaataa	ctgcaataat	120
ggaaacggat	ccggtgactc	cttcgatttc	agaaataaga	gaacttttagc	acaaaagcaa	180
catgaacacc	atcaccacca	tcaccatcaa	catcaacacc	aacaccaagc	tccacacca	240
gcacaccacc	atcatcatca	tggagaagta	aatcaccaag	caccacaggt	tcaccaacaa	300
gtacatggtc	aagaccaagc	acaccatcac	catcatcacc	accatcatca	attacaacct	360
caacaacccc	agggaacagt	tgctaattct	cttagtaatg	aaccagttgt	aaaaacccaa	420
gtattcaggg	aagcaagacc	agggtggaggt	ttaaaagcat	atgaagaaaa	atacgaatca	480
aaacactata	aattaaagga	aaatgttgct	gatggtaaaa	aagattgtga	tgaaaaatac	540
gaagctgcca	attatgcttt	ctccgaagag	tgcccataca	ccgtaaacga	ttatagccaa	600
gaaaatggtc	caaatatatt	tgctttaaga	aaaagattcc	ctcttggaat	gaatgatgaa	660
gatgaagaag	gtaaagaagc	attagcaata	aaagataaat	taccaggtgg	tttagatgaa	720
tacaaaacc	aattatatgg	aatatgtaat	gagacatgta	ccacatgtgg	acctgccgct	780
atagattatg	ttccagcaga	tgccacaaat	ggctatgctt	atggaggaag	gtcacacgat	840
ggttctcagc	gtaattttaag	aggacacgat	aataaagggt	cagaagggtta	tggatatgaa	900
gttccatata	accaggatt	taatggtgct	cctggaagta	atggtatgca	aaattatgtc	960
ccaccccatg	gtgcaggcta	ttcagctcca	tacggagttc	cacatgggtgc	agcccatggt	1020
tcaagatata	gttcattcag	ttccgtaaat	aaatatggaa	aacacgggtga	tgaaaaacac	1080
catttctcta	aaaagcatga	aggaaatgac	gggtgaaggag	aaaaaaagaa	aaaatcaaaa	1140
aaacacaaaag	accacgatgg	agaaaaagaa	aaatcaaaaa	aacacaaaaga	caatgaagat	1200
gcagaaagcg	taaaatcaaa	aaaacacaaa	agccacgatt	gtgaaaagaa	aaaatcaaaa	1260
aaacacaaaag	acaatgaaga	tgacagaaagc	gtaaaatcaa	aaaaaagtgt	taaagaaaaag	1320
ggagaaaaagc	ataatggaaa	aaaaccatgc	agcaaaaaaa	ctaacgaaga	aaataaaaaat	1380
aaagaaaaaaa	ccaataattc	aaaatcagat	ggatcaaaaag	ctcatgaaaa	aaaagaaaaat	1440
gaaacaaaaaa	acaccgctgg	agaaaaataaa	aaagtagatt	ctacttcagc	tgataataaaa	1500
tcaacaaatg	ctgctacacc	aggcgcaaaa	gataaaactc	aaggaggaaa	aactgacaaa	1560
acaggagcaa	gtactaatgc	cgcaacaaat	aaaggacaat	gtgctgctga	aggagcaact	1620
aaggagagcaa	ctaaagaagc	aagtacttct	aaagaagcaa	caaaagaagc	aagtacttct	1680



aaagaagcaa	caaaagaagc	aagtacttct	aaagaagcaa	caaaagaagc	aagtacttct	1740
aaaggagcaa	ctaaagaagc	aagtactact	gaaggagcaa	ctaaaggagc	aagtactact	1800
gcaggttcaa	ctacaggagc	aactacagga	gctaattgag	tacaattctaa	agatgaaact	1860
gccgataaaa	atgctgcaaa	taattggtgaa	caagtaattgt	caagaggaca	agcacaatta	1920
caagaagcag	gaagaaaaaa	gaagaaaaaga	ggatgctgtg	gttaa		1965

<210> 230  
 <211> 639  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 230						
atgaagggat	ctggatcaga	aaaaaatgta	tatcttttcaa	ataaaaaataa	agaaattaat	60
atgaaccaac	aatcagataa	taaaatgtgt	gatgaatgtg	atgatatgaa	tcaaccagga	120
gatgtaaata	aaaatgacaa	aacatcaaat	gatcaagcaa	attcaagtga	ttctgattgt	180
gagcccttac	catttggatt	aaaaccttca	gatttaaata	gaaaagttac	agaagaagat	240
ttagaaagaa	tgataataga	attaccagga	aaattagaaa	ggaaagatat	gtatttaata	300
tggcattata	gtcatttctct	tttgagagat	aaatttaata	aaatgaaaag	ttcgttatgg	360
agtatttgtg	ggaaattagc	tcatgaacat	aagttaccat	tcaaaattaa	aatgaagaaa	420
tgggtggaat	gttgtggtca	tgttacagat	gaattattaa	taaaagagca	tgatgattat	480
aattctatat	ataattatat	taataatgaa	tcatcaagtc	gtgaacaatt	tcttatattt	540
cttaatatga	taaagcattc	atggacaaca	tttactatgg	agacttttat	taaatgtaag	600
atttcttttag	aaaataacat	gagaaatggt	acaaattaa			639

<210> 231  
 <211> 768  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 231						
atgaacatat	tggttaacttt	atttattcat	acaaataaaa	tatataccat	aataattata	60
acatatatag	tattatgtta	cctattcctt	tgcagctttt	atgtgaagaa	aagtataaaa	120
aacattacaa	gagaaaaaaa	atatatgtat	caaagaataa	ttgttgaaag	agaagatgtt	180
atatggaaac	aagattttcaa	aataacctta	aacgaaaaaa	gttatgagag	attaaattta	240
cctactgaaa	agcaaatacc	atattctaca	tgttcagaag	aaatcgaaaa	agttcataat	300
ttaactacaa	gggtaacaga	aatatggaaa	ctattattag	aacaaatgga	agttaaatat	360
ttgattaaaa	cagataatat	gaatcataaa	tggagagatt	ttatgtggga	aagtaaatgg	420
gcactttatt	tagaaaacgt	ttataaattt	attaatgata	aattaaatga	accacatgta	480
tctatagttg	aaaaggaaac	ttttattcag	aaatgggtta	ttaatacttc	tcatgattat	540
aattattttt	taaattttgt	ttttgaaaga	tggaaacata	aagtaaaaag	tgtgtgtgaa	600
caatatgaag	ttttattata	tcacatttgt	tcctttttat	tttttcttat	tttttatttt	660
tcttgtattt	ttattttatt	gtttcttctt	ttcttttgta	tgtttgttta	tttattacca	720
ttttgtttgt	ttttaataat	aaattttata	aataaacat	ttatgtaa		768

<210> 232  
 <211> 3579  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 232						
atgttaaaga	aatatattat	attaatatat	atcgggtgtaa	ttctaaattt	cataactaaa	60
aataataatg	tagtgtctgt	tcctgagccc	tttttatcac	aaaacaaaga	ttcttttgaa	120
gaaaaaaaaa	atacgtatgg	ggataattta	caattggggg	catcaactat	aaatacccct	180
aaaacacaat	cacaagaaaa	taaagatata	gagaaatttc	caaaaaatac	aataataaaa	240
aaaacgaata	attttccaag	taccttaaat	gagaaatttc	ctcataaaat	tcaattaacc	300
aataaaagaaa	ataaaagaaga	tgaacaaaat	aaagaaaata	aaaaagatga	acaaaataaa	360
gaagatgaac	aaaataaaca	aaataaagaa	gatgaacaaa	ataaacaaaa	caaggataaa	420
aaaaatatag	taagtaacaa	attatcggga	aacaatgaac	aacagaataa	ttctattcca	480
aaatcaatac	aaaaaccaga	gaatttgtgc	aaaaaacaaa	gcaatcaatt	tcctcgtagt	540
tatccagaat	tctttgaagc	aaattttgga	cccatagatg	aacttatgga	tgaaacggat	600
tatagtagtg	atgatttaga	agatcaacta	aaattatggt	atagaggaat	agaacatgat	660
attgatgaaa	cagattatta	tataggaagt	atattaggat	atagtgattt	tatgaataaa	720
atgaaatatc	agaatacaca	aattgataat	aacaaaggaa	aaaaaactac	aaacactatg	780
gaaaaaaaca	aaaagaacag	agataagaaa	cattctaaaa	aaaggaaaac	aaaacaaaaat	840
tataaatata	agaaggaaaa	ccaaaatata	gaaaatcata	tacctcaaag	taaatataaa	900
caagaacgaa	ttgaaatatt	agatgataat	ggaaaagaat	tgaaatccca	caaaaatatt	960
aaagaagaaa	aggggggaat	agaaaaaact	gataactacta	atatagcaga	tataaaaaata	1020

aaaaaagaag	aaagagaaac	aaaagatgaa	aaagaaaaaa	acattcaaca	gctagttaaa	1080
gatgtacaat	taataaaagt	tggagaagaa	acgaaagacg	acgaaaaaga	agacaaagaa	1140
ggaacagatg	atgaagaaga	tacagatgat	gaagaagata	cagatgatga	agaagataca	1200
gatgatgaag	aagatacaag	tgatgaagaa	actacaggtg	atcaagaaaa	caaagaagaa	1260
acagaagtag	acgaaaaaaa	aacagaaaaa	gccgaagaag	aattagaaga	agacaaagaa	1320
gaatcagaaa	aagacaaaga	agaatcagaa	aaagataaag	agaatcaga	aaaagataaa	1380
gaagaatcag	aaaaagacaa	agaaaaaact	gaagaagatg	aagaaaaaac	tgaagacgaa	1440
aaaggaacgg	aagtatacaa	aaaagaaaca	gatgtagatg	aaaaaaaaga	aaagggagaa	1500
tatggagagg	gaacagatga	tgaagaagac	aaagaaaaag	aagaagacga	cgaagaaaca	1560
aaagtagaag	aaaagaaaaa	agaaaaagac	gaagagggaa	cagattatga	agaagataca	1620
gatgattcag	acaaagatga	agaaacaaaa	gtagaagaaa	agaaaaacaga	aagagacgaa	1680
gaagaaactg	aagaagacga	aaaagaaaca	gaagtagaaa	aaaaaagaaac	agaaaaagac	1740
gaagagggaa	cagattatga	agaagataca	gatgattcag	acaaagatgt	agaaacagaa	1800
gtagaagaaa	cagacgcaga	agacaaagaa	gaaaacgaag	aggggaacaga	tgatgaagaa	1860
gacaaagtag	aagaaacaga	cctagacgac	caagaagaag	acggagaaga	agataaagaa	1920
gacgacaaag	aaaaagacaa	agaagatgac	aaagaagatg	acaaagaaaa	agacaaagaa	1980
gatgacaaag	aaaaatacaa	agaagatgac	aaagaagatg	acaaagaaga	tgacaaagaa	2040
aaagacaaag	aagataacaa	agaaaaagac	aaagaagatg	acaaagaaaa	agacaaagaa	2100
gatgacaaag	aaaaagacaa	agaagatgac	aaagaagatg	acaaagaaaa	taacaaagaa	2160
aaagacaaag	aagataacaa	agaaaaagac	aaagaagatg	acaaagaaaa	acatgataaa	2220
catgtaagaa	gaataaaaaa	gaaaatgaaa	gatgatgact	atgatgaaa	tttgaaaacg	2280
aaaaattatt	atccacataa	tatgacattt	ggacaacaac	aatatattccc	atactataat	2340
ccattagaac	aacagaatta	tcaactacat	catattataa	aacaacagca	aaattatcac	2400
ccacatcata	ttataaaaca	acagcaaaaat	cataatccac	atcatatttt	acaagagcaa	2460
gaaaaacatc	acccacaagg	tataccaaag	gaacaacccat	ataataatgt	tccttatatc	2520
ttaaaaaagg	ggcttgaacc	caaaaactcat	aaccatgtaa	aagaagatca	acctaattatt	2580
aaacaggggtg	ttgtaaaggg	acaagaacca	catgttgatg	atatgcataa	caatacaaaa	2640
gaacataaga	attttaaaaa	tacaaccgat	gtaaaaacaac	cagcaagtca	tatatataat	2700
aattcatcag	aaaaacaaat	tgaacatgta	tataataagt	ctcctgaaaa	acaaattgaa	2760
catgtatata	ataagtctcc	tgaaaaacaa	attgaacatg	tatataataa	ttctcctgaa	2820
aaacaaattg	aacatgtata	taataattct	cctgaaaaaac	aaattgaaca	tgtatataat	2880
aattctcctg	aaaaacaaat	tgaacatgta	tataataatt	ctcctgaaaa	acctgcaaga	2940
catacaaaata	atattttcatt	agaaaaacaa	aatagtcata	aatataatgt	taatatacaa	3000
gatcgacatg	atcctgtata	ttataaatat	gaagatatgt	taaaaagaga	taaagatttg	3060
tttacaatta	tcaacaacat	ttgtgaactg	gaatttaatt	ctacaaataa	ctattttaatg	3120
aaaataatta	ataacgacaa	attaaaacat	aattctttaa	atgataatga	agccatatta	3180
aaagaaataa	ctaaaactca	aatgaattg	ttttctttaa	aattaccatt	agaaattaaa	3240
gtatcaatgg	ctcttcgtat	aagtgaacgt	ttacgtgcct	ttgtttttga	taaagattta	3300
acagcttatt	atataaaaaa	attaaaagat	atattttaaat	tagaaacaga	ggcagcaaaa	3360
aattattatt	attatgtaaa	atgtcaaaaa	acgttttagtg	ataaaaaacg	tttggttaat	3420
aatttagatt	caataaaaatt	atactatgaa	tcacaaatta	ataaaaaattt	tattagcata	3480
cccaaagata	aaataacctac	agctatatat	cgtatatcca	acttagttaa	tgattttaatt	3540
tttttacttc	cacaatcaaa	tgcaaacaaa	gcattataa			3579

<210> 233  
 <211> 321  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 233	atgaaactct	ccaaaatctt	atattttcttc	gcagccctct	tagctctcaa	cttcattgcc	60
	ccaagagatt	acaatagcat	ggtagaagca	aagccagcca	aaaaattaac	accagcagaa	120
	aggaaaaaga	gaaatcaaaa	tataatgata	tacagttcta	tagcctctgc	tggtgcttta	180
	cttattggag	gtgcagtagg	tttaggtatt	catgttacata	aaaataacaa	gggagacaac	240
	aagaaaggta	ctccaggagc	aaaaaaaaat	gataacaaag	cagtaaacc	atcaatatca	300
	agtaccatgt	acagagccta	a				321

<210> 234  
 <211> 3927  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 234	atgtttattt	tttttttggt	ttttttttat	aatgatgtaa	tgacaaggaa	tatgtttttt	60
	ttgtataata	aactgactgg	ttcgtcaaga	aaatttgatg	atatattaaa	ggagaaaaat	120
	gcagatgtgg	aaaaaaagga	tgtgacgtta	aatttagatg	aaaagaaaaa	cgttgaagaa	180
	tataaaaaga	ataaggacgt	ttttaaaaat	gaggaggata	attttttctt	tgtatttgat	240
	gataaagaga	taaataaatt	gaataaaata	aaagaagaac	aatgtaatat	gaaagaaaaat	300

gaattttataa	atgaaaaagg	atatatatattg	aatgatgaaa	atgtttctac	gatttaataat	350
ataacttcat	taaataatga	tatccttcat	tctagtata	aaaatgttg	tacaagtat	420
aataattatc	catcaaagg	taataataat	aataataata	ataataataa	tgtaatacat	480
tctaacaata	gtaacatttt	tgtaaagat	tcacatatgg	aacattttga	tgatattaca	540
gatgaatttt	ttaaaataga	tcaaactaat	tttagcttct	ttcaatttaa	cacatctttt	600
gaaaataaga	aaaacgtaaa	tgaagaagag	ttaatgaaac	atacagataa	tattaacata	660
tgtagataaaa	taatagataa	aaaaaaaaat	tgtaatacat	taagtgtatt	aatacatgat	720
gataattttat	ttaacgataa	tttgaatatt	tatgaagata	ataataataa	agatgatgta	780
atatcaactg	atttgttcat	gttgaaaaat	aattataata	aaaattttga	gaaaaatgaa	840
attgatgtag	tagtagatac	atctactaca	tttgaaaaata	taaataatga	taacaatgag	900
aagaattttat	ataattttaaa	taatcaaattg	agtataaagg	aattgttaaa	taataataag	960
gatgatacat	tttatataaaa	taataagttc	cttataagtg	aaaataatat	attgttagaa	1020
gataaagaca	tatcctttat	agataggaaa	atagaaagta	ataagtgtga	agattattgt	1080
gttaataata	ataataataa	taatgaaagg	aataaccttt	cggatatatt	agaaaatgct	1140
tattcaaagg	attgtgaaag	tagaacaata	aatgaggata	gaatatataa	caattttgag	1200
gatatggata	aaattagtca	tgatgcattt	gattttatta	tacctagttc	atttaataag	1260
gaagaagata	atggaaatga	aaaatatcag	aatgtattcg	atagtaataa	agacaacctc	1320
gaaaatataa	atgttgagga	tctccttttc	tccaattttt	cagaagaaaa	acagaatttt	1380
tttcaaaatt	gtgatatgtc	agaaaaatatt	tggttaaata	aaaaatttga	tgagcataat	1440
gtttttgaaa	agaacgaaat	atatgaacct	aagaatgtat	atgaaaatga	aaattatgat	1500
cagaagatg	tggacgaatc	aagtaaattt	tttgaaaaata	atgttttttt	ttgggatgac	1560
aaaaataaaa	atgtggatga	aattattgac	agtggggtag	aaggaaattg	tgatgtagaa	1620
gaaaagcttg	ataaagaaga	agaaaagaca	tattttgtgg	agacagggat	aaactatggt	1680
gatgaactac	cacgaagaaa	ttttgaagaa	atagatgaaa	actataaaga	agtggtagaa	1740
gaaaaatttg	atgaaaaaat	gggagaaaaat	ttttttgaag	aggttgaaga	aaaatatgat	1800
gaaaaagtg	gaaaaaatat	ttttgaagag	gttgaagaaa	aatttgatga	aaaaatgaga	1860
gaaaatattt	ttgcagagat	agaagaagaa	aaatatgatg	aaaaaatggg	agaaaatatt	1920
tttgaagagg	tagaagaaaa	ttttggtgaa	aaagtgggaa	aaaatatttt	tgaagaggta	1980
gaagaaaaat	ttgatgaaaa	aatgggagaa	tttttttttg	acgaggtaga	agaaaaattt	2040
gatgaaaaaa	tggggagaatt	tttttttgac	gaggtagaag	aaaaatttga	tgaaaaaatg	2100
ggagaaaaata	tttttgaaaga	aataccaaaa	aaagatgacg	tagaaataga	agaaacatat	2160
agtgaaaaaa	tgtgggaaat	acatgacgaa	aaaataaaaag	ataagtatga	tgaaccatat	2220
gaaaagatac	atgatgagaa	aaaggaaagta	gaggagtctt	ttttaattgc	tgataaaaaa	2280
aaagaagaga	atgaagattc	caatgttgaa	atactcaaca	ttgataagaa	caatttttat	2340
tttgaaaaata	aggaaacttt	tgaaattgat	gagaaagtag	caaaaatgaa	tgaagaagat	2400
tttgttttatg	aaaataatga	aacctttgaa	tgtgaagaca	tatttttgaa	gagagaagat	2460
aacgatgatt	ctgaaaaatga	aaaagaaata	gatgaaatag	gggaggtaat	taatattggt	2520
aaatatcatt	tgaataataa	aaataattca	tatgatgatg	tgcatatatt	aacacatgat	2580
tttaaaaaatg	agttacttat	tgaaaaatat	aatgttgata	atatatgtag	tgatgataat	2640
atatatgatg	gtgataatat	atgtggtgat	gataatatat	atgatggtga	taatatatat	2700
agtgggtgata	atatatatgg	tggtgataat	atatatatgt	gtgataatat	atatagtgg	2760
gataatatat	atagtgggtga	taatatatcat	atgtggtgata	atatatatag	tggtgataat	2820
atagatgatg	ataatatata	tgatggtgat	aacataaata	gtggtgataa	tgttgaaaaat	2880
ttattgaaag	aacacaaaaat	agctgttaat	gaaagtgaag	aaatagcaca	agatatataa	2940
gaaaaatacg	aaaaaagaga	taatgaattt	actgattatg	ttgaagaaaa	tagtgatata	3000
agatttttatg	ataaaggaaa	gggggaaatg	gtgaatgaat	taattggaga	atattcagaa	3060
aaatatatgg	ataataatat	tgaagacaat	gaactgggta	tatggagtgc	tagtgtaaaa	3120
aatgataaag	aaagattaaa	tgatgataat	attgatttaa	ataataatat	ttcaaatgat	3180
tatatataaga	ataataatga	ggatataaaa	aattgtacatg	attcattttc	tataagtaat	3240
aaaagtgaat	tacatgatat	taatgggtata	ttagaaaaga	gtataagtag	taatgatatt	3300
aaatctattg	aggtatgtgt	aaagaaggaa	aacgaaatac	atcataaaaa	tatgatgaaa	3360
aagaagaagg	aattaaataa	tgataataat	ttaaattgatg	aaatgtatat	gtgtgatatt	3420
tcgaatgata	tatttaaaaa	taatgagtat	acaaaacatg	tagatgatgt	atatactttt	3480
gatgaaaaca	atagtaataa	tttaattata	ggagaagatg	aacattgtgt	aagttcaatg	3540
aattttgaaat	atcctttttaa	tataagtaaa	atgaatactg	aaagtaataa	tattttatat	3600
gaacaaaatg	ataaaaaaaa	aacaaatata	aattccgtta	aacatcctat	gacatatata	3660
aaagggttttg	aatatgcatc	agatagtata	aatttttttaa	aagcttttaa	aggggtacca	3720
cctttaccat	ttttaaaatg	taaagatatg	aaaccttata	tgaggctttt	taatattggt	3780
ctgaaggtaa	tcgagtcaaa	tgattataat	ggtaagagaa	aaataaaaagt	aaccaaagt	3840
tttatatggt	taaaacttaa	attttttgat	atgatatatg	tatttattat	atattttata	3900
ttatatattt	ttttattttt	taagtag				3927

&lt;210&gt; 235

&lt;211&gt; 1617

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 235

atggttcacc taagtaaaag aaataatatt aaaagctttt taaattattg caaagcgaaa 60

tatttgaacc	ctttactaat	taataaaaaat	gaagacataa	taaaagaaac	cagtattttta	120
aaaaataaca	acttgtatag	tagaaaaggag	tcgaatgttt	ttatagaaat	attaaaaatca	180
tcctttataa	aatttagagg	acaaaaaata	aacgaagaaa	taaataacca	taataatatt	240
attaataata	gtagtccaaa	taataatcat	aatatattatc	atgatacaaa	caaaaaaaaaa	300
aaacaacaat	atgaagaaaa	acataatgta	tttcataceg	aaaatatgca	taaagaagtt	360
ttactatgta	tggatgtttt	acaatatgaa	gaagataaaag	taaatcgtga	attacattta	420
ttacattctt	attttaataa	agaaagaaca	aatatgtatc	cttatacctt	atgtgaaagt	480
aaaaataaaaa	atattgatga	atatatatat	aatatattta	aaaccaatta	taaaaacatt	540
gatgaattta	ttacatatat	ttattttatat	aaaggaaaaa	gatttagagt	tatcttaagt	600
atcctattta	aaaatatatt	acatcatata	gataatgttt	caaaaattaa	aacaaatttt	660
aaaaatagaa	atatccaaag	aaaatttttc	aaatcaaata	aactcacgtc	aaattattta	720
tcaaataaat	taaaactata	caacttgaaa	ataacacaaa	aaaaaaacat	atgtgaaaaa	780
acagtcttag	ataatcaatg	taaaattata	gctgtctcag	aaattataca	tatgggttct	840
cttttacatg	atgatgtcat	agatgattca	aataaaaagaa	gaggtgtcat	agcattacat	900
aaaaaatttg	gaaataaaat	ttcaatatta	tcaggggatt	atctcttagc	acgtgctagt	960
tctatttttg	ctggtagcgg	ttcaccaaaa	attttagtaa	gtttctctta	tgttgtcgaa	1020
agtttaataa	aaggagaatt	cttacaaga	aatttaaaat	ttaataatgt	tgaagaagca	1080
ctcaaaatgt	atttaattaa	atcatatcat	aaaacagctt	ctcttttttc	tcatttattt	1140
gcatgtatag	ccattctatc	atttaaaaaat	gatactatta	tacaattatg	ttttaattta	1200
ggattacaca	taggtatggc	ttttcaatta	tatgatgatt	atctagatta	taaaatcgat	1260
gacaatacaa	acaaacctat	attaaatgat	ttaaaaaata	atattaaaac	agctccctta	1320
ttatttttct	ataattataa	ccctcaagtt	atcttacaat	taattaataa	aaattcatat	1380
acaaataatg	atattgaaaa	tatttttatat	tatatccaac	attctaatag	tatgaaaaaa	1440
aatgaattgt	gttcattatt	acatatataa	aaggcatctg	atattctata	ctccttaata	1500
tctcattgta	ataaacctag	tacaaataaa	aacaatacca	aacatgatga	tataaaacaa	1560
agtagcgagg	cattaattaa	tttaattctta	aacgtgttat	caagaaacgt	caaatga	1617

&lt;210&gt; 236

&lt;211&gt; 348

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 236

atggggaggtg	atatatttcg	tttattgcca	accgaagcta	caggttggtt	aataagaata	60
aaaaatatat	cctgttttga	caaaaaaagt	gaagtaataa	atttcgtggg	tcatttagtt	120
gagatattgtt	tgatacatgt	agatttctta	aagaatgaag	cttatgtttt	attacattca	180
aggggaagagg	ttttacattt	tatgaaacta	tattatgtaa	tttgtaacaa	tatgcatttt	240
attgataaaa	ccaagagaaa	tatagaaata	gaaatatata	atgaagagga	ggaaaatgta	300
ttttggaaaag	agagtaaaaag	gaattgtact	aaatttaata	tttggttaa		348

&lt;210&gt; 237

&lt;211&gt; 237

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 237

atgttccctt	ttttatattt	ttcttttaac	cctataagac	ctgctagaag	taagcactgt	60
tcatactggt	cttcttgtat	atccagatat	gatcatcatt	gtttcttatt	gaataattgt	120
ataggagggt	acaataatat	gtattattta	gtttttcttc	atatacatat	tattataacc	180
ttttattcaa	catatataag	taaatatata	cacacacaaa	aaattaaaat	aaaataa	237

&lt;210&gt; 238

&lt;211&gt; 5940

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 238

atgggtattca	cgttcaaaaa	taagaaaaag	aaaaaagaag	ctagttcaga	taaagtaagc	60
aaagaatcat	ttaatgagga	agataatgaa	aataatgaaa	agagggaaaa	aagcgattca	120
tggtaataaaa	aaataataga	aactaaagga	aaaagtaaaa	ctaaatataa	aaatgataat	180
tccttagatg	ataatattaa	tgaggacata	ataaataata	ataataataa	taataatgat	240
aataataatg	ataacaataa	tgataataat	aatgataata	ataatgataa	taataatgat	300
aataataatg	agaataataa	tgataataat	aatttttaata	attatagcga	tgaaatatca	360
aaaaatatta	tacataaaga	caatgagcta	gaaaaccagc	ttaaggatac	attaaagtcc	420
attagttcgt	tgtcgaataa	aattgtgaat	tacgaaagta	aaattgaaga	attagaaaaa	480
gaattaaaag	aagtaaaagga	taagaatatt	gataataatg	attatgaaaa	taaattaaaa	540
gaaaaagaag	attttgttaa	acaaaaaatt	gatatgctaa	atgaaaaaga	aaatctttta	600

caagaaaaag	aattagatat	taataaaaaga	gaaaagaaaa	ttaatgaaaa	agaaaagaat	660
ataataaaaa	aggaagaaac	atttcataat	atagaaaaag	agtattttaga	aaaaaataaa	720
gaaagagaaa	cgatttctat	agaaattata	gatatttaaaa	aacatctaga	aaaactaaaa	780
atagaaataa	aagaaaaaaa	agaagattta	gaaaatttaa	ataaaaaatt	gttatcaaaa	840
gaaaatgtac	taaaagaatt	aaaaggatgt	gttaaggaaa	aaaatgaaac	cattaattca	900
ttgaatgata	atattattga	aaaagaaaaa	aaatataaat	tattagaata	tgagttggaa	960
gaaaaaaata	aacaaattga	tttattaaac	aaacaagaaa	aagaaaagga	aaaggagaag	1020
gaaagggaaa	aggagaagga	aagggaaaaag	gaaaaagaaa	aggaatatga	tacattaatc	1080
aaagaattaa	aagatgaaaa	gattttccatt	ttagaaaaag	ttcattccat	taaagtaaga	1140
gaaatggata	ttgaaaaaag	agaacataat	ttccttcata	tggaagatca	attaaaagat	1200
ttaaaaaata	gttttgtaaa	gaataataat	caattaaaaag	tatataaatg	tgaaataaag	1260
aatcttaaaa	ccgaattaga	aaaaaaagaa	aaagaattaa	aagatataga	aaatgtatct	1320
aaagaagaaa	taataaaatt	aataaaacca	ttaaatgaaa	aggagaaaca	aattcttgcg	1380
tttaataaaa	atcataaaga	agaaattcat	ggattgaaag	aagaattaaa	agaatctgtg	1440
aaaataacca	aaatagaac	acaagagtta	caagaaatgg	tagacatcaa	acaaaaagag	1500
ttagaccaat	tcgaggaaaa	atataacgca	caaatagaaa	gtataagcat	cgaattaagt	1560
aaaaaagaga	aggaatataa	tcaatataaa	aatacttata	tagaagaaat	aaataattta	1620
aatgaaaaat	tagaagaaac	taataaaagaa	tatacgaatt	tacaaaaata	ttatacaaat	1680
gaaataaata	tgtaaataa	tgatatacat	atggttaaatg	gcaatataaa	aaccatgaat	1740
acacaaataa	gtacttttaa	aaatgatgta	catgtgttaa	atgaacaaat	agataaatta	1800
aataatgaaa	agggtacatt	aaatagttaa	attagtgaat	tgaatgttca	aattatggat	1860
ttaaaagagg	aaaaagattt	cttaataaat	caaattgtag	atttaagtaa	tcaaattgat	1920
ttgttaacaa	gaaaaatgga	agagaaggaa	aataaaatgt	tggaacagga	gaataagtat	1980
aaacaagaga	tggaactctt	aagggggaaat	ataaaaaagt	ctgagaatat	tttaacaat	2040
gacgaagagg	tgtgtgattt	aaaaaggaaa	ttaagtttga	aggaaagtga	aatgaaaatg	2100
atgaaggagg	aacatgataa	gaagttggct	gaagttgaaag	atgattgtga	tgtgaggata	2160
cgggagatga	atgaaaagaa	tgaagataaa	attaatatgt	taaaggaaga	atatgaagat	2220
aaaattaata	cggtgaagga	acaaaatgaa	gataaaatta	atacgttaaa	ggaacaaaat	2280
gaagataaaa	ttaatacatt	gaaagaagag	tatgaacata	aaattaatac	gatgaaggaa	2340
gaatatgaac	ataaaaattaa	tacgttgaat	gaacaaaatg	aacataaaat	taatacgttg	2400
aatgaacaaa	atgaacataa	aattaatacg	atgaaggag	aatatgaaga	taaaatgaac	2460
acgttgaatg	aacaaaatga	agataaaatg	aattcgttga	aggaagagta	tgaaaaataag	2520
ataaatcaaa	taatatagtaa	taatgaaata	aaaataaaaag	atgtagtgaa	tgaatatatt	2580
gaagaagtgg	acaaattaaa	agttactttg	gatgaaaaaa	aaaaacaatt	tgataaagaa	2640
ataaattacg	cacatatcaa	agctcatgaa	aaggagcaaa	tattattaac	agaaatggaa	2700
gaattaaaat	gtcagagggg	taataaatat	tcagatttat	atgagaaata	tattaaacta	2760
ataaaaaagta	tttgatgat	aattaacatt	gaatgttgtg	atgatataga	aaatgaagat	2820
attataagaa	gaattgaaga	atatataaat	aataacaaag	gcttgaaaaa	agaagtagaa	2880
gaaaaaagaa	ataaaagaca	ttctctcttt	aattttttta	aaagtaaaga	aaagtttttt	2940
aaaaatagca	tagaagataa	aagtcatgaa	ttaaaaaaa	aacatgaaaa	agattttatta	3000
tcaaaaagata	aagaaattga	agaaaagaat	aaaaaaataa	aagaactgaa	taatgatata	3060
aaaaagttac	aagatgaaat	attagtatat	aaaaaacaaa	gtaatgcaca	acaagtagat	3120
cataaaaaaga	aaagttggat	tcttctttaa	gataaatcta	aagagaaaaa	aaaagataaa	3180
gaaaatcaaa	taaatgtaga	aaaaaatgaa	gaaaaggatt	taaaaaaaa	agatgatgaa	3240
ataagaattt	taaatgaaga	acttgtaaaa	tataaaacaa	ttttatataa	tttaaaaaaa	3300
gatccattat	tacaaaatca	agatttatta	tcaaaaattg	acataaattc	tttaacaata	3360
aatgaaggaa	tgtgtgtaga	taaaatagaa	gagcacattt	tggaattatga	tgaagaaata	3420
aataaaaagca	gatctaattt	gtttcaacta	aaaaatgaaa	tatgttcttt	aacaactgag	3480
gttatggaac	ttataataaa	gaaaaatgaa	ttaattgaag	aaaataataa	attaaattta	3540
gtagatcaag	gaaagaagaa	attaaaaaag	gatgtggaaa	aacaaaaaaa	agaaatagag	3600
aaattaaata	aacaattaac	aaaatgtaat	aaacaaatag	atgaattaaa	tgaagaagtg	3660
gaaaaattaa	ataatgaaaa	tattgaatta	attacatat	caaattgatt	aaataacaaa	3720
tttgatatga	aagaaaaata	tcttatgatg	aaattagatg	aaaatgaaga	taatataaag	3780
aaaatgaaaa	gtaaaattga	tgatatggaa	aaagaaataa	aatatagaga	agatgaaaaa	3840
aaaagaaatt	taaatgaaat	taataattta	aagaaaaaga	atgaagatat	gtgtatttaa	3900
tataatgaaa	tgaattattaa	gtatggagat	atttgtgtaa	aatatgaaga	aatgtctctt	3960
acgtataaag	aaacatctct	taaataatgag	caaattaaag	tgaaatatga	tgaaaagtgt	4020
tctcaatatg	acgaaatacg	ttttcaatat	gatggagaaat	gttttcaata	tgatgagata	4080
aataagaaat	atggtgcttt	attaatatata	aatattacta	ataaaatggg	tgattcaaaa	4140
gtggatagaa	ataataatga	aataatttca	gtagataata	aagtagaagg	aattgcgaat	4200
tattttaaac	aaatatttga	attaaatgaa	gagatcatat	gattaaaagg	agaaataaat	4260
aaaattagct	tattatatag	taatgaatta	aatgagaaaa	atagtatatga	tataaacatg	4320
aaacatatat	aagaacaatt	actttttttg	gaaaagacaa	ataaagaaaa	tgaagaaaaa	4380
ataattaatt	tgactagcca	atattctgat	gcatacaaga	agaagagtga	tgaatctaaa	4440
ttatgtgggt	cacagtttgt	tgatgatgtt	aatatatatg	gaaatatatc	aaataataat	4500
ataagaacaa	atgaatataa	atatgaagag	atgtttgata	cgaatataga	agagaagaat	4560
ggtatgcatt	tatctaagta	tattcatcta	ttagaagaaa	ataaatttcg	atgtatgaaa	4620
ataatttatg	aaaatgaaaa	tataaaaagt	agtaataaaa	taattggatt	gtataattat	4680
tcaaggtatt	atgggttaa	agaagatttg	tgtaaagaag	aatcgtttcc	ttcaaaaaata	4740
ggaaatatat	ctaataaaaa	tgaaaataat	aataagaaga	acaacacttg	tgatgggttat	4800

gatgagaagg	ttacaatagt	tttatgcatt	atattaaatg	aaataataaa	atttttattt	4860
ttaaatgacg	aatatgtatt	attatttgaa	aagattcata	aaaatgtttg	gaaacgaatg	4920
tatatcccag	aagaaataaa	attttttatc	ctaaaatata	ttacgctgtt	aaataacttg	4980
agagattata	taataagtgt	acataataat	atgaaaaatg	agaaatatga	tgaatgttgg	5040
tttttatttc	aacattattt	tgaagatcgc	agtgtatgta	gaaaagagat	ggttcatttc	5100
ttattagaaa	gaaagagtca	agaaaattta	atatctttta	aaagtaaatt	aaaaagtaaa	5160
aaagaaaaaa	tattaacaat	ggacatatgt	aatttttagta	aagaacatat	gcaattaaaa	5220
accatagctc	atctaagaaa	agaaataaat	tatgaaaaac	tttctaagga	taccttaaat	5280
agagattata	attttattatt	atataaatat	caagaatgtg	taagtaaatt	aaaaagggtg	5340
aaaaatttaa	tgaaagaaat	aaatcaaaat	gtattttatag	aaaaatatga	tgatataagt	5400
aaagaatttag	ataatttttc	agatggatat	aatgaacaaa	atgaacaaca	tgtaattggt	5460
cctatttttat	taaataataa	taaaaacaaa	aataacaaat	tgataactga	acataataat	5520
cctataatta	ataggctaac	taatttttca	caaaacagag	attcaaaata	taaaaataaa	5580
ataatggatg	atgtaaaaca	aagaaaaata	aatagtacaa	tgaataatac	aaataaaaaat	5640
ggtatttaata	ttatatataa	tcattatgaa	aatttaaata	aaccaaacta	taatgataat	5700
ataaatagat	taaattcata	tcattcaaaat	atacatattg	ctaattcaat	tcattccta	5760
agaaatcaaa	ataaaaagttt	tcttacgaat	caagcaataa	gtacatatag	tgttatgaaa	5820
aattatataa	attcagataa	accaaattta	aatggaaaaa	agagtgtgaa	aaatattttt	5880
aatgaaattg	tcgatgaaaa	tgtaataaaa	acgtttgttc	ataaaagtgt	atttttttaa	5940

&lt;210&gt; 239

&lt;211&gt; 7458

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 239

atgttttcag	tcgaattaga	aaatcgatca	ggttataaaa	aaaggaaaaa	aaagaaatgg	60
aataataaaa	gtactgggtca	ggataaaatt	acgaacaaag	atattatata	agaggaaaaa	120
gaagaaggac	ttgatataga	atgtgggtcat	aatattctgg	gggatgtaca	atatgatggg	180
acataataata	taaatgaaca	agttaagaaa	aatctattgt	tctattttta	atgtaaagag	240
gaaattaatt	taaaagatgg	aaatataata	ttggatgata	aaaatagaaa	agtggatgat	300
ataaatataa	caggggatga	taaaaatata	aaagtggatg	ataaaaaat	aaaagtggat	360
gataaaaaata	taacagggga	ggataaaaa	ataacagggg	aggataaaaa	tataacaggg	420
gatgataaaa	atataatttt	tgatgttgat	gaaatattaa	tccatcaaca	taatacatca	480
aatagtaata	tatatataaa	ttgtaatgat	aataataatg	atattaggaa	cagttcfaat	540
gtacagcatt	attataatga	taaaaataaa	gaaaatataa	ataaaacaaa	taaaaagtat	600
gttttaataa	atgatttat	aaataataaa	tatattttat	caaaaaataa	gacatgtaaa	660
ataaataaag	gaaaaaaatt	aattaaaaaa	aaaaaagtaa	ataatatttc	taggaggagg	720
aatcatatat	tatataaatg	tcgtaataag	ttatataatg	gaaatgtttt	ttctgacgat	780
attattaaaa	gtgaagtga	tgtatgtaat	tcgttaactg	tacttcataa	gaattataat	840
attaatatgg	ataattattt	agatgataat	atacatatac	ataatagcaa	tatttatgat	900
attaattata	caaataaaaa	tggtattaat	tcaacatgtc	gttattatcc	cataggtaat	960
aataacacat	taagtaaaaga	tgaagttaca	aaatcaagtt	caaaaaattaa	ttccctttct	1020
tattttgatg	atattattaa	tgtaaaataa	aatgatatac	ctatttttaca	tgataaagaa	1080
aatataaata	taataagtaa	caaggaaagc	tgtcataagg	atgaaaagga	ggaagagaaa	1140
tatatcatgt	ataattcaaa	tttagtagaa	gaaaaaaaac	aaaaaaaaat	gattttggaat	1200
tctcttaatg	tattaccaat	agatatacta	cttaaaaatg	gacatgatga	aattaataaa	1260
gagatatgca	aaaaaaaaaa	aaaaagtttt	tttagtcaga	atgatataaa	gtctaaaatg	1320
ttatacaata	ataaaaagta	ttcaaaaagt	gaaaaagtat	tatatataaa	taataaaaaac	1380
agtaatacgt	tcatttcctat	attttttctta	aataaggtag	gagacaagtt	taaaaactct	1440
gagaatatat	atgatatgta	taataataaa	aaaaatgtct	atatacatga	taagaagata	1500
tatactaata	tgtattctaa	taaattaaaa	cagaaacatt	attatagcac	ttctaataa	1560
aattttattat	ataataatat	aggaaaggta	ttagataatg	gtctacattt	atcgaataat	1620
atgtattgtc	gttttaaattc	aaatccacca	tataagagta	tctcgttaat	taataacaat	1680
gttttttttt	ataaaaagag	gaaaagtaat	agtaataata	ataataataa	taataatatt	1740
agtagtagta	gtagtagtag	tagtaaaaaa	aatcacgtga	tcattaataa	aaaaatatca	1800
tcttataata	ttcattataa	agaaagaaa	gattcggtta	aagagaattt	tttatttttc	1860
aaagagaaaa	ttttaccatc	aaaaaaagat	acttgtgttt	ttaatgaaag	acaaaaagat	1920
ctttttgaaa	aaagtaatga	acataattaaa	tgcgttttct	cttttaataa	tacatcagat	1980
gatattttctt	cacattcaag	cgtaaaataa	aaagaacctt	tttttgcttt	aaaaaataat	2040
tccataaggc	acataccaaa	agaaaataat	ataatatata	catctgggaa	atcttttaat	2100
catgtgcagg	ataaggaaaa	gactgttcta	cttaaaaaaa	agaaagaaat	aaatgataag	2160
aatacattta	gctcttggtt	aataaaccat	aatataacaa	catatacatt	acaaaatgga	2220
gtaaaataaaa	atttaaatat	gttaggaata	agagattcta	tttataaaat	agatgaaaag	2280
aacaatatgt	tgaaagaatg	ttataatgga	aataatgata	gtaataataa	gaaaaaaaag	2340
aagaaaaaaa	aattatcttt	ttcatgtgat	attataaatg	ataatattac	accttatgaa	2400
tcagataagg	agaaaaacaa	ttctaataat	attaagagta	tggtatatatt	taattatgta	2460
aaaagaaaaa	gcaaccttta	taataattta	tcttcgaaca	gggattctac	tgtagatatg	2520
cataataaat	ataatagtga	agaatatata	aatatacaga	gaacaaataa	aatatatgaa	2580



ttgagtaata	aaagaattag	aaattataaa	ttgtatagta	tggatgaaat	atttaagggtg	2640
tctcttaagg	aaaaaaaaata	tatagataat	atttctaata	atatggaaag	agtaacatat	2700
aaaaatgaaa	tgataaatga	aaagataagt	aagatggacg	atatattata	tccttgtgac	2760
aaaaataaat	ctttaaacat	gtcttgtcct	gttataatag	aaaataatat	atcaagagaa	2820
gaaatgaaa	aaaattcaag	tgttatatta	ataaaaaaaa	agaatgagaa	tatgtttaat	2880
tgtgttggaa	ggttacattg	tcacatgggc	aaaatgaata	atcaagataa	tatatatgac	2940
caaggggaata	taaaaaaaaaa	tgaagaagaa	ataaccaaac	atgatgaata	tatatcaagg	3000
gaagaaaaaa	ataaatataa	tagtaaatgt	attagaaatt	ttgatgacta	taaatatgaa	3060
caagtgttga	gttaccatac	gttggatgaa	gacaaaaaaa	aaaatgatat	gaacaattta	3120
atagatatga	ataatgaggc	gattattgaa	acggtgaatg	gtgttattaa	taattattata	3180
ttggatagaa	aagataataa	cagtaggaag	gatattggaga	aagagatgga	gaaggagatg	3240
gagaagaaga	tggagaagga	gatggagaag	gtgatggaga	aggagatgga	gaagggtgatg	3300
gagaaggagg	tggaagaaaga	attgaaaaat	gagatgaaca	ataggatgaa	caataggatg	3360
aacaatgaga	tgaaaaatga	aataaacatt	tataaaaaaca	atgagatata	tgtagataat	3420
gataaagaac	tagaaattgt	aaatgaggag	aagaaactta	tttaccatt	taattacgaa	3480
tctgatgtac	ataaaaaatat	gaatatgtca	attaatatata	ataattgtaa	agatgattat	3540
aataatatat	taaaagaata	tgtagataat	tcattgtcttg	ctcaaaagga	agagaatata	3600
tttcgacctt	tattcaattt	aaataagaaa	gataaagtat	ggaaacgttt	taatataaag	3660
aataatatata	agacaataat	acataatgaa	gagatgaaaa	gaatatatca	aactattaat	3720
aaaaatgttt	ttcctatttta	taattttta	cgatatgaaa	attttttta	aatcatttta	3780
acatatataat	ttccaaaaaa	tgattttatt	aaattatcat	acaaagtaag	tatgaataat	3840
ataagggaatt	tgtatatgtc	taataaacat	ataaataata	attatgatata	tatgaataaa	3900
ttatataatc	aaaatatata	tacattaaaa	tatcaggtag	ctaatataga	taatgatcat	3960
catatatgta	agaaaggggg	aggggttggat	tatatataata	tgaatatatc	aaaagaatgt	4020
aaaaatagga	aagacaaaaac	atattttaaat	aaaatatttc	attataagaa	gaaaaaggat	4080
gcacgcctttt	ttataaatga	cgaaattgggt	tctaattgatt	atatgtatga	tataaaaaaa	4140
aaatatagta	acgatgaaaa	taattataaa	ttaaatgaaa	agatgaacat	atctatgtca	4200
aatgatgaag	atatgattcc	tacgttaaat	agtgaacatg	gaaataattt	tccaagttgt	4260
caaccgaatt	tattagaaaa	aaaaagttact	tatatagatt	tgaacttata	tgatagtaat	4320
tctatggacg	atttttacaga	agaaaaatat	aattttgtta	ataatgaaaa	tgattttatt	4380
aataactaaaa	catggaagtt	taatttttcc	aagggttaaaa	atctgtttta	taataaattt	4440
tttaattgtat	ctaattgagga	tggtgtgttt	tcttttttta	aaaatatgaa	tcttttttagg	4500
gaacttaata	aatcaaataa	tagcttaaaa	ctagagagtg	ttaaaaatag	taataataat	4560
tgtagtaata	ataagggtga	tgataaatatt	ggaaatatgg	agaatatgaa	tacaacaaat	4620
gttacaattg	cgagtgatga	acatatatct	acaaagggag	atatacacga	cgaatcattt	4680
tctagagacg	ataatgattg	tatcctttta	aaaattgaag	gtagaagtaa	aaaatatagt	4740
gatataacct	tataaatga	ggacaaaagt	aatlttgaga	atgacaatga	gactattaat	4800
gaatatgaaa	atgtatgtag	taacatagat	gttaatgaat	gggaagataa	ggtaaatgggt	4860
acatgtaata	gtgttgggtga	taaagagact	gaaaagaata	atgaaaagaa	taatgaaaag	4920
aataatgaaa	agaataatga	aaagaataat	gaaaagaata	atgaaaagaa	taatgaaaag	4980
aataatgaaa	agaataatga	agaaaaataat	gaaggaaata	atgaagaaaa	taatgaagaa	5040
aataatgaag	aaaataatga	agaaaaataat	gatatagaaa	agaatgatata	aaaggataat	5100
aattcgggac	aagtgaagaa	aaatatataat	gttatgaaata	atacaaacaa	tatggatgtt	5160
gataatgatg	ataataacaa	taattacaat	aatgttagta	ctgatgaagg	tatagatata	5220
attaaaaaca	tcaaaagtga	gatgaatgat	tatatittata	atgataatat	tatgattaag	5280
ataaataata	aaagtataga	tcttatgaat	ataaaaaaatc	aaaagaatga	acctttttta	5340
aattatacaa	atgaaaagga	tatacatatg	aagagcaatt	catcatataa	tgtaaatgat	5400
aaaatgaatt	tatttaataa	taatgagaaa	acagaaaaaa	ataatactag	tttaaacgat	5460
ttattatata	aaagaaaaga	agaattagat	gatgaaaaaa	tatctgaata	taaggataca	5520
aaattatacaa	acaatacctt	tgaacatata	gctaaaagga	ttaatttaat	tttgaatgat	5580
acaattgaat	tttttcaaaa	acatacatat	cttcataatg	gttatggtaa	tgttcagggtg	5640
tgcaaaaaga	acaagaggaa	attagaaaaa	aagaagtgtga	aaaaatgggtc	ctgtattttat	5700
aaaatttaata	aaattgtacg	taaagggggcc	cacgggggtgg	tgttttctgc	gtggagaagt	5760
gagaatgttg	attttttttaa	tcattcgttt	tttgaaaact	taaatttgga	gaataaaaaag	5820
aagggatata	tcgatgaaac	aaatgttaat	gaaaattatg	agtctgataa	tgaatatgat	5880
agtgatgaag	atgatactga	aagtgataat	gatgatgagc	aaaataaaga	gaatgaaaga	5940
gggatgaaaa	aggatggata	tgaagaaatg	aatgggggag	ataagaatga	agaaatgaat	6000
gggggagata	agaatgaaga	aatgaatgtg	ggagataaaa	atggagggaat	aatgagggaa	6060
cataaaaaatg	aaggaataaa	tgaggaacat	aaggatgaac	taataaataa	ggaacataaa	6120
aacgagcgaa	taaatgagga	acataaaaaac	gaacgaataa	atgaggaaca	taaaaatgaa	6180
ggaataaatg	aggaacataa	aatgaagga	ataaatgagg	aacataaaaa	cgaacgaata	6240
aatgaggaac	ataaaaaatga	aggaataaat	aaactgacct	atcataatat	gaataaaaaat	6300
aatatttcaa	atgaaaatata	ttataatgat	gacgattctt	atgatgaaga	taatttggtta	6360
tccctgaaga	taataaaactt	aaaatattta	agtaaaaaaga	atagttttaa	aaacattttg	6420
agagaagtaa	atttttttaa	aatgtgtgaa	catccaaatg	tagtaaaaata	tttcgaatct	6480
tttttttggc	ctccttggtta	tttagttatt	gtgtgtgaat	atttatcagg	aggaacatta	6540
tatgatttat	ataaaaaatta	tggtagaata	tcagaagatc	ttttagtata	tatcttagat	6600
gatgtattaa	atgggtttaa	ttatttacat	aatgaatgta	gttcaccact	tatacataga	6660
gatataaaac	caacaaatat	cgttctttcc	aaagatggta	tagctaagat	aattgatttt	6720
ggttcttgtg	aagaattgaa	aaatagtgat	cagtctaaag	aattagtggtg	tactatatat	6780

tatatatcac	ctgaaatatt	gatgagaact	aattatgatt	gttcactctga	tatatgggtca	6840
ttgggtatta	caatatatga	aattgtttta	tgtaccttac	catggaaaag	aaatcaatca	6900
tttgaaaatt	atataaaaac	cataattaat	tcatcaccaa	aaattaacat	aacagaagga	6960
tatagtaaac	acttatgtta	ttttgttgag	aagtgtttac	aaaagaaacc	tgagaacaga	7020
ggaaatgtga	aagattttatt	aaatcataaa	tttttgatta	aaaagaggta	tattaaaaag	7080
aaacctagtt	ctatatatga	aataagagat	atattaaaaa	tatataatgg	taaaggtaaa	7140
acaaatatct	tccgaaatttt	ttttaagaac	ctttttttct	tcaatgataa	gaataaaaaa	7200
aaaaaaccaa	ataaaatgat	cagttccaaa	tcctgtgatg	cagaaatgtt	ctttgaacag	7260
ttaaaaaggg	aaaattttga	tttttttgaa	attaaattaa	aagatgatga	aaatagtaga	7320
tccttgaata	cgtttaatat	aaatatatct	aaagaaagag	acgacatatc	atattcttct	7380
ttaaatttgg	aaaaaatcaa	agaacacagt	ctcaatatgg	tagcatctgt	tgctcgggact	7440
gaacaatccc	agaaatga					7458

&lt;210&gt; 240

&lt;211&gt; 1524

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 240

atgaagacga	caaaagaaaa	tgacaataat	aacatagtag	attatgtaga	ttggataaac	60
cagattttta	aaaagaattc	tttacaatgt	gatttatatt	ttttggatga	caacaaagaa	120
aaagatgtta	gtaagaaaag	aaaagctcaa	ttgaaggatg	aatatgataa	tatatcaagg	180
agcaaagaaa	atattaataa	ttccaaaaaa	ataaaaaatg	aattaagtat	aaaagataat	240
atgcacgatt	acatatatga	tgatcgtatc	tacaataatg	ataaagagaa	aaatggtata	300
aaaagtgtata	ataaaaaatgt	tataaaaaag	gataataaaa	atgttataaa	aagtgtataat	360
aaaaatgtta	taaaaaagtga	taataaaaaat	gttataaaaa	gtgataataa	aaatggtata	420
aaaagtgtata	ataaaaaatgt	tataaaaaag	gattataaaa	gtgatgatag	aaatgcttgt	480
gatattttata	aaagtaataa	aaaaaatgtt	cctgataaatt	gccatatata	tgatgtataat	540
agttcagttg	aaaattttaga	tggaaaaaat	aaattaaata	atataaggaa	catacataat	600
gataactcat	cttcatgcga	tatatccgat	ataaaaaagt	aagatgaata	tatagaacca	660
tatgaaaaaa	agaatgaaga	aaatataaat	gaatataaga	ataagaaaaa	tatagccaat	720
gaaaaataaa	aagaaggaaa	gagttcaatt	tataatgatg	aacataatta	taattcatta	780
ttatataatt	cttgtaatgg	tgaaataagt	aagatcaaca	aaataagtag	tcataataat	840
attgataata	atatggataa	ttataatacg	tttgcaaatg	tgaataatgt	tataatatat	900
tcctcagatg	atgaagataa	tatatcaaat	tattataatg	gtaaagacgt	attaaatgat	960
gagattatgt	tccttataaa	atttaatttt	gaaaaattaa	aaaaaaatat	ttatgtataa	1020
gagcatatag	acaaaatata	ttatgatata	tttttaataa	aaaaatccag	tgaaaaaagt	1080
gtttttatga	atgatgaatc	tactggttat	ttgaaaaatg	atgtgaatga	caaagtgtgt	1140
gttgataata	taaatgttat	taatccttct	agtgtgaata	cgttgagtaa	tatttcaa	1200
attaggaatg	aaaaaataga	aaataataat	aagaatgaaa	aattaataaa	atcatatcct	1260
acacaatcaa	aaaatgttat	gagtacattt	tccttttgga	atattgaaaa	ggagacattt	1320
ataacaaaac	ctttgtatgc	acaaaatttg	agaaaaaaac	aatttagttt	attagatgaa	1380
tctgaagaga	tgataagaaa	ttattcatct	aatcaatatt	ctataaaatt	tgtaccaaga	1440
cattttattat	atgtaatgag	tcaagttgct	tctcgatcct	tttttgatcc	tttatataga	1500
aagcagttat	tttttcgtta	ctaa				1524

&lt;210&gt; 241

&lt;211&gt; 729

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 241

atggtaagtg	ataaggaaga	tcaatgtaac	aaaattaata	acaatgataa	tggtactagt	60
ctcgaaagca	ttaatgaaga	aaaaaaaaat	aatacaaatg	agggggggaga	aagcttcttt	120
gacaataatg	ctgagcaata	tttaattata	tcattaagac	aaaaactgaa	tccagttata	180
aaaaaaataa	aaagagttcg	ttataaattt	aataatatta	taccagattt	tttagtaggg	240
aaaaataatg	catgtctttt	tatatccatg	aaatatcatc	gtttacgctc	aaattattta	300
aaagctagaa	tagaaacttt	atcaaataaa	tataataaca	gaatattatt	atgtctagt	360
gatatggaaa	atattgaaaa	ttcttttagga	gaaataaatc	aattatcgtt	ttctttta	420
atgacactta	tattatgttg	gtctaataaa	gaatgtgcca	gagtaattga	agattttcgt	480
atatatgaaa	aaaaaatttc	atatattata	aaaaaaaaaa	tatcctcttc	taatcaagaa	540
gaaaaaatac	atgaactatt	aaaaaaatc	agatgtatac	atacaacaga	ttgtataaca	600
cttacaacca	aatttaaaaa	ttttaaaaa	attattcaag	ctaaaaaaga	agatctaata	660
agttgtctag	gcttgggtat	taaaaaaata	caggcattaa	tggtacatt	taacgacccg	720
tttttttaa						729

&lt;210&gt; 242



<211> 72  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 242  
 gggtctgtag tgtagtgggt agcactgcag actctgactc tgcaaacctg gggtcaaatac 60  
 ccagcagaac ct 72

<210> 243  
 <211> 1908  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 243  
 atgagtcttt atatgaatat ttttgaacaa atcgaaatta ttttagaaaa atgtaataat 60  
 gaaacgttta taaagattaa cacattaatt gatcatatta ttagaaatta tgcgaatgaa 120  
 aatatgaaag aaatccatga gagaaaaaaa ggaaatgata ataataataa aaagaagaag 180  
 aaaaagaaaa aagaaaaataa cacaataacc atacgtaatt attttaattt ggtagataaa 240  
 gaaaaataatt taaaaaataa taataataat gatgatgggt taacaaatgt aatggagcaa 300  
 gataaaaaata aagattgttt attatcatta acaattaaaa ataataataa taataagacc 360  
 ataattaata tgtttttttt ctttggacat ttttaattata tgattattat atattatgtt 420  
 atatataaat taaaaatgtt tgataaggat ttattttatac atgaaaaaaa ttcaaacatt 480  
 catacaaatc aaagttatac agccgatagt ataagtgtg atctaaataa agtaggctca 540  
 gataataata gaaataaaaa tattattatg aggcatacta atataataa taaagaacat 600  
 tatcttcaaa aaaaatataa tatacaagat gcgaagaag aagataatga aaccataaga 660  
 agcgacagca aattaagaga catatatagt gatagtcaaa gtaaatgat tatgatgagt 720  
 tcaagtccaa acaaagaaga agaaagtatg agtagtgata atcataataa agatattaat 780  
 agtagtgata atcaaaataa agatattaat agtagtgatc ataatatgaa tgatagtact 840  
 aatgaaagta caacaacaag tttaagtaca agtataataa acacaaatag gaataagaag 900  
 aatagaaaaa aaaataatat taacattaat aataataata ataatagtaa taatattaat 960  
 agtagtagta ataataatag tggggtatat cattatcttc ctagtcaaaa atataataat 1020  
 aaatataata catacaataa taaagatcat attattttatc acaataaatg tattacacat 1080  
 atattatgtt cacaattaat gtatctagat atgaattcat tcaatcaagc tatacaagat 1140  
 attgttaaaa caaataaata caaattatta agaattatta ttcttgaagc ttttgatagt 1200  
 ctaaatgaat attatagaaa aaattttttg aataagttaa aaaaatgtaa tgtacttatt 1260  
 ttatacaca gtactcatgc cttaaatgat accttcctac ataattgttt atataacgt 1320  
 atacccaaac cagataaaat attatttaat aatcatatat tagactttct aaaaacaaat 1380  
 tataaaatca ataactttaa taatcaaaaa aaacaatata ttattaatgt tttaaattat 1440  
 tgtaattttg atataccact tatattagca ttattatata taatacaact acataaattt 1500  
 ccagatatca aaaaaattat taaactaatc attaatcaa atattaaaaa attaataaat 1560  
 gtaatacata aatgtatcat atcaaaataat tctttttttg ttattagaaa tatattatat 1620  
 aatatcttat atacatataa ttttcatcta cataatttcc taaatacatt ctgtaaagaa 1680  
 ctagcagcat atcataaaaa tgataataat tataaaaaaag atttatatgc tctatttctc 1740  
 aaatatacat atattacatc aatgcatgat atgcacatat gctctctaga aaatctatgc 1800  
 tccaatatca tactacttga aaaaaaatat gcaaaaacgt ttaatgaagt tgataccaat 1860  
 tctgaagata cagaggactt ttctataaac ataaagtgtg aagaataa 1908

<210> 244  
 <211> 1299  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 244  
 atgaataacg attcagtgac gtgggaaata ttgggtaaag ggaaatgttc ctttaagaaa 60  
 aaagtggata ctgaaatatt ttgttttaaat gaatataatg taacaggttt atgtacaaaa 120  
 gcaattgttc cgtaagtaa tagtgtatat tctacaataa tattagataa gggtagaaata 180  
 tttttatata tgaaatctgt tgaaagagca catttaccta gtgccttatg gagtaggggt 240  
 cttttgagtt taaacaaaaa ggaagctttt aatgtttattt ataaagagtt aaaatttaca 300  
 cagaatataa aacatataaa gaaatgtatg aagagatatg taaggataaa agaaatatta 360  
 aagaggagta gaaaactcat attacaaaaa caagtaaaaa tgatgcctat taagaagaaa 420  
 acggaaagga gagataaaac aagagaaaaa aaagctttta aagctgcaaa cctttttaat 480  
 aacgtagaaa aggaattgtt gaatagatta aatactggaa tttatggatc tctatataag 540  
 ttcttaactc ctaaaaagaa aatgaaaaat aaggattctg agttaacaaa aatatttgat 600  
 gtgatggggg agaataaaga tgaaatgaaa aagaagggga aaaaaggaaa ggacgaaaat 660  
 gtaaattatg agacaatgtc tcaggagggg ggaggccagg aggatgatga tgaagatgtg 720  
 gatatggatg atgatgatga ggatgtagat atggatgatg aagatgagga tgtagatag 780  
 gatgatgaag atgaggatgt agataggat gatgaagat aggatgtaga tatggatgat 840  
 gaagatgagg atgtagatat ggatgatgaa gatgaggat tagatatgga tgatgaagat 900

gaggatgtag	atatggatga	tgttgatgat	gatgatgaag	atgtagatat	ggatgatgtt	960
gatgatgatg	atgaagatgt	agatatggat	gatgttggtg	atgatgatga	tgaaggtggt	1020
atatatgatg	ataatgatga	ggatgactat	gataattata	atgataatga	taaagacagc	1080
gttgaagaaa	gtacctcaat	aagtaatgat	aaaaagaaga	aaaagaagag	aaagagaaaa	1140
gaatacaaaa	aggaatatgt	tgacaatgag	cacataaaaa	atttacaagc	aaatgggaag	1200
ctggcaatgg	acgatgatga	aatagaagaa	atgaatcata	attttagaag	aaaaaaaaaa	1260
tcaaatagta	aaaaggaaaa	aggtaaatat	tgtatgtga			1299

&lt;210&gt; 245

&lt;211&gt; 1683

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 245

atgattatgt	catataaaaa	aaaaaataat	aatgatgtta	taaataatat	tcaaagagcg	60
aaaaatgatt	tattttttat	aaaaccatct	gtaaaattaa	atttatgttc	aagtaaattt	120
atacatagaa	taaaaagtgt	gaacaaaaga	tatgttgaaa	aaaatgagta	tattcaacaa	180
atagataatg	atatagaaga	aaaaaaaaaa	aaaaaaaaaa	ctacatctaa	acgcaacaat	240
aaaagtagta	atcaaattaa	tgatgattat	gaaacgtttt	taatagtgtga	tggatcgctt	300
atattattta	aaaatttttt	tggtagcccg	tttttaaaaa	atgataatga	tgtaaattta	360
agtactatat	atggatttat	acaatcatta	aataaaaatat	ataattttatt	tttacctaca	420
tatatagcta	tcatatttga	ttctaagaca	tctaataatg	ataagaaaaa	aattttatgca	480
aattataaaa	tttttagacg	gaaaaacccg	gatgaattat	atgaacaact	aaaaattgta	540
agtaactttt	gtgatactat	aggaattaaa	acaatttagct	caaccaatat	tgagagtgtat	600
gattatatag	caagaattgt	tgataatatt	agtaatacat	taaaagaaaa	aaaacaaaag	660
gatttttcct	tcgttaataa	tcaccaagaa	aaagaacctc	ctccaatgta	tacctatatg	720
aaaaataatg	tatatgataa	tgacgggagt	attggaacga	ataagatatt	tgataaggaa	780
cccaatcata	taaatggtaa	cataaatggt	aacgtaaatg	atcacacaaa	tggtaacgta	840
aatgatcaca	taaatggtaa	cataaatgat	cacataaatg	gtaacataaa	tgatcacata	900
aatgatcaca	caaacgatca	cacaaaacgat	cacacaaaacg	atcacacaaa	cgatcacaca	960
aacgatcaca	caaacgatca	tctaaacgac	tacgaatact	acgaatacta	caacactaat	1020
gatgatgatc	actataacat	aaacgatgat	gatcactatc	acataaatga	cgatgcatat	1080
aataattttt	atgataatat	atatgctgag	gaaaacgtat	catgccatga	aaatggttga	1140
acaaataata	tagataaaaa	aaaaaaattt	cgagttattg	ttgtttccag	tgataaggat	1200
ctattacaat	tattagaata	taataatgag	acataataata	tgatataatc	catatgtcaa	1260
ccaaataaaa	aatatcgttt	agtaaatcca	catttttttt	atgaagaaca	tgaaattatta	1320
ccctctcaat	atagtgttta	tttaattcta	acaggagata	aaacagatgg	gatattctgga	1380
gtaccttata	taggtgacaa	aacaagtaaa	tgcttattaa	agaatatca	taatattgaa	1440
aatattttta	aaaattttaca	taaacttcct	agtaaatcac	atcatatatt	tcttaataat	1500
atagagaata	ttaatacatt	taggaaactt	ataaaaactaa	aatgtgaaac	taatgaatct	1560
ttagtttttg	atgattataa	acaaaaaaga	ataaaaaatt	ttgaacaatt	taggaatttc	1620
gctgateaat	attcattaca	taagttgtta	aaaaaaagtg	taatagttaa	ttaccatgat	1680
ttaa						1683

&lt;210&gt; 246

&lt;211&gt; 2394

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 246

atgtctacga	cagatgagtt	gaacctctta	atacaaaatt	tacaaaaaatg	taataatacag	60
aatgagtgca	taaatttcga	tttgctcgagt	accatacaag	gtttttttaa	ttgttttagat	120
agaaatgtac	tagaaaaat	tgataaagggt	ttaggggaaa	acgaatatga	aaaagaggta	180
gtggataaatt	ttacgtccgc	tgctatatatt	gttgaaaaatt	gtgtaaaaat	atttagtcaa	240
aaaatttgagc	atttacataa	tttagcacat	ataacattat	ataatattta	taaagaaaat	300
aaacataaact	cgatcatcaa	aaaaaaccag	ttgataatgt	ctgatgaaga	agaatattta	360
tatattaacg	aaataaaaaa	tatgaaaaat	acacaacatg	ataatgatat	aattgaagat	420
gatataattaa	ttaaaacgat	accattttcca	acttttcttt	tttctgataa	tattaaaaaa	480
actaaagata	taaatgaaga	taaaagaaaa	acaaatttta	ataataatga	ggaagataaa	540
gaaaaagata	ataaaaacaa	agacaatgat	atagatgcta	ttaatgaatt	tgaaattaca	600
gataataaatt	ctgtgaacac	attaaatttt	gaaaaaatat	ttattgaaaa	tgatggtatc	660
ttattatttag	atataaatga	ttataacgta	tttatagatg	atccttataa	tttttctata	720
caaaataaaaa	atagtactat	cttattttgaa	aaatatgatt	ttttttctag	acgttcaaca	780
tattttatctt	caaatacttt	gagtaaatat	gttgtagaaa	ataaaaaat	ggatcatata	840
tataaaactat	ataatcatat	aacagatata	ataaataaaa	atatatgttt	cgatattttt	900
ttattttaaac	aagatttttt	tgattatgat	ttttcttttag	gtatattaaa	aaataaaaaa	960
tctatttctca	acaaatttaa	gcaacaacaa	aaaaaattac	atccttttaga	agaaaataca	1020
cacatggata	ctcatcatat	taataataat	catcattttac	aaaaaatatga	tttaaataga	1080

ccccgcccc	attattatat	gttacattgt	tataatatca	aaaattatca	agactttttt	1140
agatacatgc	aaccacaatta	tatacttgaa	ataatgaaac	gtcacataat	caaagaaata	1200
tataacacaa	atcaacaaga	aagagctata	caaaaggaag	catatgagat	atataatgaa	1260
caaacacaaa	aaaaaaatga	tcataaagaa	aataataata	ttgacgttcc	aaaatataag	1320
gataatacaa	aatgttatga	tagtccattt	tataattatt	atattttctaa	taatataatc	1380
caatttgatc	atttgattga	tgatgatatg	atatattttg	atgaatattt	ttataaaaagc	1440
ctcattttat	acaatacaaaa	tataaatgat	cttcataaaa	acacaaacaa	taatcaaaact	1500
aatgatgaaa	ctaataattat	aaacaatatg	aaagatgaaa	aacaaaaaaa	tctcattata	1560
tattcaaata	ttacaatttt	ctcaaatgat	caaaaattat	ttaatcaaat	aaaaattcca	1620
gaattatata	tccaaaaaatt	agggttgaat	ttttcatact	atcatctaga	accattaata	1680
tacaatttca	taaaaaacact	taaaaaaaaa	aatgattttg	aaaaattttt	ttcgggtgaac	1740
ctttttgatg	ataaacctat	atatgaattt	gacattttta	gagatgatga	gtatgacgaa	1800
caaaaaaatg	aagataataa	aaatcatata	gaagaaaata	ttaactttga	aaatattaca	1860
gacaaaaata	tattaaatga	tgaaatggat	aataaccta	tagctatttt	cgaaaacgac	1920
catctcgata	atacatttat	tatgaatgac	gaccaagaat	tgcaagacag	agtcagcaag	1980
tggaatgcct	ttctggagga	aaaactagaa	attttgaaaa	ggcaacacaa	atacgatttg	2040
gatctttata	agaagaatat	tattaactat	acaataaata	acggtgaaaa	catattattt	2100
actaaactta	ttaagaataa	agacaaaatt	gaaatatcca	gaaatttttt	aacgacactc	2160
atgttaatta	atgcagatat	attaaacata	aaaaaaatca	ataaacataa	aaaatctaac	2220
aatataagta	attatgaaat	acatatataa	aaggaaaacc	tacaacaata	tctaagcatc	2280
tcaaaagcaag	ttcaaaaata	atctttttcta	attaaagaga	aaaaaaagaaa	aaaaaataaa	2340
caacatctca	caaatggtat	gaaagatacc	tcaaaaaaaa	agcaaaaaat	atga	2394

&lt;210&gt; 247

&lt;211&gt; 6888

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 247

atgattaaaa	atgtttttta	tttgaatttt	atatttttctt	tttttctatt	aataattaaa	60
tgtgatgaga	gtgtgtccaa	tggaaggaaa	gaaatatatt	ttgatgacga	tgaaaaatta	120
aaactatctt	ctttttttga	tcgttctaca	aataataaatt	tagatgtcgg	tgagaatgat	180
gagctgtcat	catacgtccc	tagggaggtg	gatgaaaaaa	aaaaaaaaaa	taagaaagat	240
atagatagta	aggaaaattc	aaaaagtggg	aacaatatat	ataataagga	caatactaaa	300
aataatgaag	atgttaatta	taatgttggt	ttaaaggatg	gtcgtgcaaa	ggaggggaatt	360
ataacagacg	aaaaaagaag	gagtagtaca	aaggatggta	aaaataaaga	acaaaaataa	420
aataaaatga	atagtgtatg	tgttcatgat	aataataata	atatgaatga	tattaacttt	480
gttggtgaat	acaataaaaat	gattgataat	tatgacaaaa	ttttggatga	gcttatatta	540
aaaagtataa	atagaaaata	ttataattat	tttaatatgc	ttgatgaata	ttctcttcag	600
acaaaactga	ataaagaaat	gtatgatagt	ttaaattatt	tgattagact	tatgaataat	660
aaaaatagta	ggaaatattt	tatatccttt	tcaaataatg	agaagaagaa	aataataaaa	720
aatgatatga	atgaaaacat	atatataaga	catttttattg	tatctttatt	tagatgggat	780
aataatttta	aattaataga	aacttggttt	gataagaata	attttattta	ttatattgac	840
gaaaaataaaa	tatattctta	taaatataat	tataagctta	tgttgaattt	atttagttct	900
gaaaattttt	tatattatat	aaattttaagt	aaattttcat	tattggaaat	tattgataat	960
tataataaat	atagttttat	tattaataat	ataaaaagag	attatcctaa	taatatgtat	1020
gtctgtcagt	catttttatga	tttcatttat	tcatatttct	taagttataa	tcatcatttt	1080
tttgataaac	ataaatatct	aataaatatg	gatatatgga	ataattcaat	acaaacaaaa	1140
gggcaaattg	gaaatcataa	attatataaa	aaattaaaaa	aactaaatga	aaatttaata	1200
ttatataaatt	atataaaaaa	tgatgattca	gaaatgatac	cttatgtttac	attagaaatg	1260
cgtatgatat	tttctaactt	tacaaattta	ttaatagata	tattgaataa	attatataat	1320
atagattatc	aggataatat	aaaacaagaa	aatgtaaatg	ttaatcccca	gagggatgca	1380
ccacaagatt	atgtacataa	taagaatgac	gttgacgtgt	ctttaaaaaa	tgtaaaggaa	1440
ccaaaaaaaag	tagagcataa	taaggctatg	tcgaattatg	agactgatga	aagagggtgat	1500
atgatatatg	ataatacaaa	taaggagaag	tttgaaaaga	gcgaagggtac	attcaacaat	1560
attagtgggg	gtgaggatac	attcaagaat	attagtgggg	gtgaggatac	attcaagaat	1620
attagtggag	gtgatgggtg	ggttgatggt	gatgggtgag	gtgatgggtg	tggtgatggt	1680
gaggggtgcag	atgactcttc	ggttgataca	cataataata	aaaatgatgg	aaaggaatcg	1740
gagagtgatg	tgtggaattt	actaatggat	tcatataaga	aactagcgaa	tgatgagaat	1800
tttaaaaaat	acaataagta	tatattaaag	aatttagata	agtttttgaa	catgtcatct	1860
gaaaaaaaag	aagatatatt	tagttataaa	aataaaatag	aattaaaaga	gggtataata	1920
tataataagg	tttctgataa	atatattcct	ttaatattta	atcctacaaa	agatgtattt	1980
acatctatta	atcaaattaa	tattaaaagt	aagataaact	tttttaatat	atatgaatat	2040
ttaataacta	ttacaaagta	taaagagaac	aaaaattttt	atgatgattt	attaaaatgt	2100
agaagagaaa	tttttttttaa	ggatcgatcat	ttgttagaaa	ataataatat	tatggataag	2160
caagaagaat	tgaaaaagaa	catctcgaaat	ttgatgcgta	ttcatgaagt	atcaaataaa	2220
ggaaataata	ggaacacaat	aaatagaaaa	tataaaaaat	atggaacata	tgattatgat	2280
aaaatgaatg	aatttatatta	tgtagaaaaa	aatatattaa	atgtgaatga	tacgaatata	2340
tttaatttta	tgaataataa	agaaaaggat	aagaattatt	ttgatataaa	taaaacaatg	2400

agaatatatg	attattataa	taatatataat	ttgaatatat	ttaccccagc	agctataaaa	2460
atgaaagata	aaatatatga	tcaattaaaa	ttattgagaa	gtaattttgt	tgagaaatta	2520
aaaaatgaat	ctatttgtgt	tttatcattt	ttatatttta	taggtataaa	tgatgataat	2580
gggaaattac	atttcccata	tggatttcca	agaaatattg	atttttctgt	gaaacttata	2640
agagaaggga	aagatgggtt	atgtaatttt	ttaagtgggtg	ttttatatca	tataaatttta	2700
cctatctttg	taaataattc	ttctatatcc	aaatgaatga	tgatgtatta	2760	
gaaatgaacg	ataattctat	caatagtttt	ttttatatat	attataaaaa	taatgaaaat	2820
ataagaaatc	atgatttttt	atctgacgaa	aatagaataa	taccacaggaa	agaagataat	2880
ataaaatcta	aaattatttc	atattcttta	ggttcatcaa	aagacgattt	tttttagtaaa	2940
ttagctttta	caaataatgt	gatttagattg	aaatataaga	ataaaaacaaa	taacacctac	3000
ttaaaagatt	attttgattt	tacttttgat	aaaattaatt	ataaaaattc	agtaataaaa	3060
aataacgtat	ctccattttt	aacgacatgt	gattattttat	taagtaatat	attaggagca	3120
gtgggttgatt	ccttgagaaa	ttcatctact	ttagaaagtg	gagtatatga	agaaaatata	3180
aatgataaaa	ataaaaaatat	aattcaaaaat	actgtagtac	aaaacaaaaa	tttgtttgaa	3240
tattttgtaa	aattagctga	taatagaaac	tcatatgctt	tagcagcgtt	gggtgaaata	3300
tattatttag	gaaatgaaag	tataggaatt	gaaagagatg	aaatcaaagc	ttttgaattc	3360
tggaaaaagg	cagcagatca	aggagataca	acctctgcat	tgtctacagg	ttatgcatat	3420
ttggatgagt	ataaaaaagt	tctaaaaaaa	gaagaacttg	ttaaaaatat	ggatagggag	3480
gatataattaa	caatgatata	tttggaataa	tccaccaagg	ataagaaaaa	tggtactttg	3540
gaaatgttcc	aagaatctag	tgagaaaaaa	aaccaaaga	agaagaagaa	ggagaaaaag	3600
gagcaagatg	gaaataccga	tggggataga	gttgatgata	aaattgtaca	aaatgttgga	3660
aatgtgttcc	aacaaagtta	tggtaatgtt	gatgaatcaa	tgggaaggaa	tggatccatt	3720
gatgggttct	ctatgccacc	atcgggtgga	ttaaacaatg	ttagcgtaca	aaataatgct	3780
aatatacaaaa	ataatgctaa	tatacaaaaat	aatgctaata	tacaaagtaa	tgctaataata	3840
caaaaataatg	ctaataataca	aagtaatgct	aatatacaaa	gtaatgctaa	tatacaaaagt	3900
aatgctaata	tacaaagtaa	tggttaattcc	catggtggaa	cgaatcgaca	aaacaatatt	3960
aataatgttaa	atatttttga	gaacaatgca	tacactcaac	aaacttctta	tggaggggtg	4020
gcgaacccta	gcgaagacgt	ttttaataat	tccttttctt	cgtctgttcc	tagctccttt	4080
ctctttgaca	tccccgaagg	atctgagtat	gagcatatga	cagagaatat	attggatgaa	4140
cagatgaatt	tttttaatac	gaagaataat	aaagagcagc	aagaaggagg	acctaataat	4200
gagagtaatg	gtatgtggaa	tgatgagaat	gatgaaatga	taaaaaagta	catgaaagat	4260
ttaaatgacg	atcttaataa	atcttaaaag	atagcagaag	aatattttca	caaagcaata	4320
agaaataacg	atgatagttt	agagaatata	ttagcaaaat	ataatataca	ttaaatttga	4380
ttaggtactg	aaaaaaatat	agaattagct	gggatataat	taaaaaaaagc	agctgataaa	4440
ggtgataata	tatctcaa	gttattaggc	cattattatt	caggttcaga	tatcggataa	4500
aaattgaatg	attataaaga	tgatgataaa	atagagaatt	taagaaaatc	atataaatat	4560
tataaaatgt	ctgcacagaa	tggcaatatt	atatctttat	ataataaaag	tataataata	4620
ttaaaagggtg	ttaatcctaa	atataaaaaca	tttaatgaga	aatgtgagaa	aacattgaag	4680
cattttccatt	ttataggatt	atttaatgaa	agactatata	tgtaaaccac	attattaaga	4740
agaaattatc	aatttaaga	ttatacgggc	tctttattgt	tatctattat	gttgtctgag	4800
ttaggtgacc	atgcacataa	tgtaaattgct	tctatgttat	ggacattaaa	aagaaagact	4860
atgcagcaat	ttacggaaaa	atacaatatt	gtggagaatt	taaaattatc	cttgattaag	4920
gaattgaaga	ataaggagga	gaaagaaaaa	gaaaaaagaa	aaaacaatat	tcacaatgta	4980
tataataata	ataatagtaa	tattaatgga	tataaaaaat	gtgataaaaa	ttgtaatgat	5040
aatgtaagga	agaatcaaaa	agattttaaac	caaatcgatc	acacaatagt	taaaggagat	5100
actccttatt	attatgaaaa	aaatataaat	gaaaaaatta	aaagaatata	taagaagaat	5160
aaaaatgcta	gttattcctt	ttcaaaagta	cgtaaaatgt	attctatatc	tttggtgacc	5220
aactgcagta	tgctatccga	atttttgagg	gagcgtcctt	tattttcgaa	aataatatat	5280
tgttataatt	ttaagaggga	gttatatatt	tattataata	ggttgtcatg	gtttacctac	5340
caaatgatga	agatgcaaca	tgaagatgat	ttgtcggatg	ataaggatag	gtctgaagga	5400
tggaaatgca	taaatataaa	aaagtttaat	gagaatgtac	aacgtgatca	tgtgaataga	5460
aaagagaatg	taaatgtgaa	ggcaaatgca	aatgtgaagg	caaatgcaaa	tgtgaaggaa	5520
aatgcaaatg	tgaaggaaaa	tgcaaatgtg	aaggcaaatg	caaatgtgaa	ggcaaatgca	5580
aatgtgaagg	caaatgcaaa	tgtgaaggaa	aatgcaaatg	tgaaggaaaa	tgcaaatgtg	5640
aaggaaaaatg	caaatgtgaa	ggcaaatgca	aatgtgaatg	ataatgcaaa	ttctgtatta	5700
aataaaaaatc	ataataatga	catttatgat	tattcttatt	ataagaagaa	tgatgaaaga	5760
agaaatgata	agaagagtga	attttttaat	acatacaaga	ataagaaaga	agaaaaaaaa	5820
gagattaaaa	taacatatca	tgatacatat	gatttatgta	aaaaatatag	ccaattgaa	5880
ttatatgaaa	aatatgataa	gataatttta	aatacattaa	aaaagatga	tgatgtagag	5940
gaaaaaataa	acaagataga	aaatatgaaa	agtgttatat	tagaacattt	acggattagt	6000
gagttcttac	attgttatta	taaacctata	tcatactatc	aaataaagtt	agaagaagaa	6060
aaagaaaaaaa	gagcaaaaat	agatgaacat	atatataatg	aagaaagata	ttataagaat	6120
gacaaaatcta	attataatag	tttttattca	aataagtggg	agactatgaa	agattataat	6180
ataaaaaaatt	tgtatgaatc	tgaattttat	agatactctg	tttttttaga	aaatatagat	6240
atgaaagaaa	tatttaatta	taaaaagaaa	tattcatcta	atatatttga	tgaaattcaa	6300
agtttttcaa	aaaattgtga	agtttgtaaa	caatattatg	atatatatcc	agcatattat	6360
ggacataaaa	agtcagggaat	taatttgatt	aagaaatata	gagaagggtga	tgaatttaca	6420
ataaaaaagta	aaagaaagga	attacaattc	ttaataagga	attcagatga	agataatcat	6480
caatcacttt	attataaagc	ccttttttta	gaacataata	atttagataa	tttaaaaaat	6540
attttacaaa	tatattttcaa	gctagctact	gatgacata	atacatgtaa	tgttatttgg	6600

tttttaggta	ttatgaaaat	attttttaaa	aagctatttt	tcgattttta	tatat <sup>ttt</sup> tagt	6660
aaaaataata	aaaagaatat	attcacat	ccttttaaac	acaaaacatt	ctatgatgat	6720
aatttatgtt	ctttacaaaa	aaatat	ttaaaatcgg	aatttgataa	caaagtgttc	6780
aactttgatt	atttgttaaa	aaataattat	atttattctc	aaattaggta	ttctgacttt	6840
tttaagggtt	tgtataatct	gatattatct	ttttttaaaa	ttatatga		6888

&lt;210&gt; 248

&lt;211&gt; 2091

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 248

atgaatgacg	tcaataggaa	agcattttcaa	aatgaaatga	tctttaaatac	cttggttacta	60
aatttagagg	gtagtcatac	aaataacaat	gttaaaaaaa	aaatagagca	aactaat	120
gaaaaatgtg	aaaaagcatc	tatatatttg	gataacccaa	gcatatttga	agatctacat	180
ataatagaag	ataatatata	tcctaaaatg	aaggaacaag	aaaaagaatt	aaatttgtac	240
aattatgtta	atacagatta	cacaaaacat	ttaaatgata	aaaagaatta	taatcaatgt	300
gagaaaatat	ttgatctaac	aaaatatcaa	cataaaaaata	tgaaaaaaa	aatttcattt	360
gataataatc	caaaggagtc	ctatagtgtat	aataatgatg	ttaatttatg	ttataagaat	420
ttaaattctg	agacacagta	taataatata	tatgttaata	atctcaatag	agaaaattac	480
acagaaacct	gtgaagaata	ttttaataac	ccaagtgaag	aagatagcct	gacctgttca	540
ggtatttttag	aaaaatatga	acaagacaga	atggaagaaa	ttcatatgaa	atttgaaact	600
aacagaatgt	acagcaatta	tataaaaaat	gaacataatt	tgaatgatgt	aaaaagtggg	660
aataatattg	tgaattatga	gcagaaggat	aatacatata	tatttaattt	aagttagtga	720
aaaaatgaaa	tgaatagaaa	aacgaaacaa	aaattttatt	tagatgacca	tgtggagcta	780
gccaaaaata	aaataaaaaa	taaagaagag	gcctttgtat	ataaaaaatga	aattggaaat	840
aactataatg	aaagagatat	taaaacaagc	cttaataatt	tttcgattaa	agagaagaca	900
ttatactgta	tggaaaatgt	ggaagaaaat	gataagagaa	ataaaaaaaa	taaaagaaat	960
ataaaaaata	aaagaaatat	aaaaaattat	ttgaaaaatg	aattaataaa	tatacataaa	1020
aaaggctcaa	agaaaaatta	tatcaatatg	aaagaatttg	aggataaaaat	aaaggaaata	1080
cataatgaat	atgagttaaa	gtacgacgat	atcataaaaac	aatatgatga	agatgatata	1140
agaaaaaaga	aattaataga	taatatatac	atgaaatata	tgaacatgaa	aatgaatta	1200
ataaaaacac	aaaaggaaat	tataaacata	aaagaagaga	ataataaact	aaaagaggaa	1260
ctgaaaatta	cacctgaacg	aattattgaa	agtaatat	tagacagtta	taagaataaa	1320
ttagaagaat	atattttttt	gacgaggcat	aaagatctaa	aaataaaaaa	attagaggaa	1380
gagttgaata	aagaaaaaaa	atgtattgaa	gaaaaggaaa	aaagaattag	cgcaatatct	1440
gaacaaaaaa	atagttttaca	caaaatgaat	atattattaa	aaaaggatac	tatgaacttt	1500
gaaaaaaaagt	tagaaaaattt	gagaaagata	aatgaagagt	tgaacaaat	tatat	1560
aaagaaataa	aaataagtta	ttttatcaac	atattaaata	ttattgatga	ggcaatatta	1620
aatgataata	atgttaagaa	tggttaagaat	aaaataaaaa	aggataatca	acaaaaaatg	1680
gaattagatc	ctataaaaaa	catgaacaag	aaaattataa	ttaaatccat	tgttcataaa	1740
ataaaagata	ttaataaaaa	aatggaaaca	cataaccaa	tgttgaaatc	atttgaaaat	1800
aggaaaaatc	agatttgtgca	caagaatcag	gaaatattaa	aaaacgggtga	taatttaata	1860
aaagatatata	agaaaaaaaa	tcagagtga	ttattagata	attattttga	ttcaacgggt	1920
tttagtccta	atgaaaagga	atgtacatta	gataaggaaa	ataaagaatt	aaagaccttt	1980
ttttctaattg	tagatttgga	tgaatatcaa	gaaattgatt	tatttaaatc	agaaataaaa	2040
aaggaaatac	aagttaagga	aaatatagaa	gaactatcaa	ataagggata	a	2091

&lt;210&gt; 249

&lt;211&gt; 1218

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 249

atggataagt	tattaagcag	cttagaaaaat	atcgaagtcg	acaatatctt	aaaaacggca	60
agagagttta	aggaagatac	atgtgaggag	aaaataaatt	tatccatcgg	tgtgtgttgt	120
aatgatgatg	gagacttaca	tatat	agtgtattaa	atgccgataa	gttagtaaca	180
gaaaattata	aagagaaacc	atatttggtta	ggtaacggta	cagaagattt	ttcaacatta	240
acacagaatt	taatatttgg	taataattcc	aaatatatag	aagataaaaa	aatatgtaca	300
attcaatgta	ttggagggtac	tggtgctatt	tttgttttat	tagaattttt	aaaaatgta	360
aatgttgaaa	cttttatatgt	tacaaatcca	ccttatatta	atcatgtgaa	tatgattgaa	420
tcaaggggat	ttaat	atatataaat	ttttttgatt	ataatttgat	agatataaat	480
tatgatttat	ttctaaatga	tcttagaaat	ataccaaatg	gatcctcagt	tattttacaa	540
atatcttggt	ataatccttg	tagtggtta	attgaagaaa	aatattttga	tgaataata	600
gaaattggtt	tacataaaaa	acatgttatt	atccttgata	tagcttatca	aggatttgga	660
catacaaatt	tagaagaaga	tgtcttactt	attcgaaagt	ttgaagaaa	aaatattcgc	720
ttttcgggtat	gtcaatcctt	ttcaaaaaat	atgtcgcttt	atggagaaag	agcaggtgct	780
cttcatattg	tttgtaaaaa	tcaagaagaa	aaaaaaatcg	ttttaataa	tttatgtttt	840

atcgtagcgt	aattttatct	gtctcctggt	atacatatcg	atcgtagcgt	atgccaactt	900
ttaaataatc	aaaattttaa	attaaattgg	attaaagaac	ttagtcaatt	atcacaacgt	960
attacgaata	atagaatcct	attctttaat	aaattagaaa	catatcaaaa	aaaatataat	1020
ctaaattatg	attggaatgt	ctataaaaaa	caaagagccc	ttttttcatt	cgttcctcta	1080
ctagccaaaa	ttgctgagca	tttaaaaaaa	catcatatct	atataattaa	taatggtaga	1140
ataaatgtct	ccggaataac	caaaaataat	gtcgattata	tagccgacaa	aatttgtctt	1200
tcgctaagtc	aaatatga					1218

&lt;210&gt; 250

&lt;211&gt; 3567

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 250

atgccccaac	gcacaattta	tatgtggcta	gttttcctct	ttttcttttt	ggagctagcc	60
aaatgtggga	ttccaggttt	acacaaatgg	gttataaata	atttccctag	ttgtgtaaaa	120
attgtggata	ggaataaaat	aattgattgg	aactgcatag	gaaaattaga	aaaagcaaaa	180
ggaaaacata	aaaggaatca	taatgggtgg	gataataatg	gtgataataa	tggtgataat	240
aattatgatg	ataattatga	tgataataat	tataatgatg	gttgtgagat	aaacaggaat	300
attaaaaata	aagataaacac	gtatgataac	aatataaata	atacatataa	taaatatgat	360
atagatgatg	ataaaaaaga	atcattttgt	aagggaaaaa	aatataagga	ggaaaaaatc	420
tttgaagtcg	ataattttatt	atttgcattt	aatcaactac	ttcataaagc	aaatgtttaa	480
tttattattt	atgataaatta	ttttttaaaa	cttacaaggt	taattaaaaa	tgttttaaaa	540
aaatttgaac	ccaagaaaaa	tgtgggtatt	gctattgatg	gcatttgccc	attttctaaa	600
ttaaaattac	aaattaaaag	aagagccaaa	agtaaatata	aaaataaaga	aaaccatctt	660
gtgaatgata	taacatgtgg	tagtatattt	attaataaaa	tctcaaagtt	tcttgtaaat	720
tttttaaagc	attttattatc	ttttgaaaaa	tatgaacatg	tgaagttttt	tatttcaact	780
gatcaggaag	taggagaagg	ggaacttaag	ctgatgaact	ggataagcaa	ttatgtaaaa	840
aatataaaaa	atataaaaaa	tataaaaaat	ataaaaaata	tacaaataaa	agaagatgaa	900
aaaataaata	atatgatcga	aataaaaaag	gaaaatatta	tgaatcatct	acattataaa	960
caagaaatgt	tcaatgatat	aaaaaatgat	aatttataat	atgaggaaaa	gaaaaaaatt	1020
aggacaaata	ataaaatgaa	taattcaaca	aattatgata	taacgaatgt	ggaagaagaa	1080
tcttttggtt	tagttgggtgc	agatgcagat	ttattgtttac	aatgtttgtc	tttaaaaaat	1140
gttcataata	tatttatata	cacatatcaa	atatttaagt	tagaaataaa	tgataataat	1200
atgaagaagg	aaaattatct	tatgaaaaat	aaagtgtatc	agggggatcc	cattttttaa	1260
gaggataaaa	ataatgtctg	taaaatgaat	ggggcttata	agaaatatga	agatgatatt	1320
gatagtata	atatacaaaa	ggatattaca	aggtggagta	atcataatga	taatattaat	1380
tataataatg	ataatattaa	ttataataat	gataatatta	attataataa	tgataatatt	1440
aattataata	atgataatat	taatcataat	aatgataata	ttaattataa	taatgataat	1500
attaatcata	ataatgataa	tatttaattat	aataatgata	atattaatta	taataatgat	1560
aatattaatt	ataataat	ttgtccgaca	ggtgataaaa	atcatattga	aaagatcctt	1620
ttaaaaacac	aatccacaaa	tgtacagaat	gttaaaaaaga	aaaagattaa	agtttttatac	1680
aatttataaaa	cattttattaa	tttatttttta	aacaaatatac	ccaagtgggt	tcataaaaatt	1740
aaagcagatt	tattaatcct	gttcattatta	aaaggtaattg	attatcttcc	taagattaga	1800
gaagggaatt	ttgggtatctt	ttttgaagca	tatttttaaaa	tgcttgagaa	tataaaaaaac	1860
aggaataatt	gtgaggaaaa	aaaaaaaaacg	gatgatttcg	aaataaataa	atatgatgat	1920
ttaggagaaa	gagaatatag	ttataataat	acttatgaag	gtttattaga	tggttaataat	1980
tacaaaaataa	ataaaaaaga	attttttatta	tttcttaagt	aagtacaaaa	acttgtacac	2040
tttacaacaa	tttataataa	taataatatt	agacattacc	acaattctaa	tgacatccgt	2100
tttttttaaaa	atgataaaaa	aatgtatatg	aagcaaaacta	attcctgttc	accttttatta	2160
ttaataaatg	aatttaattag	taaaaaaata	ttagacaaag	atacattttac	cataaatggt	2220
actaaaaatg	aaaatgacat	gtttcaatgt	aacttaattt	atttttaaaaa	tcataaaaaga	2280
tatgtttatt	catcaaaatc	caaaaaaaac	aaaaaacgcta	tgcatataac	atcttatgat	2340
tttttaaatg	aacattttcc	acatcttatg	aaatatatag	ataaggaata	ctttgaaaag	2400
aatatgaaac	aatcggataa	caatgtagaa	atattaaata	ataacgaatt	aaatacaaat	2460
caaatacaac	atattcaaaa	aggtgataat	aataagtggt	atgatgtgcc	tatttttaaaa	2520
aataacgtaa	aatgtttata	tgaatattat	aataatatag	gggggaatga	taaggtgaag	2580
aatagtatac	atatggagaa	ttatataaaa	aatttttatt	tacaacattg	tcaggatgaa	2640
aagatatata	aagaagaaat	ggatattggt	gaaaattata	tagagggaat	tcattggcta	2700
gttgaatgtg	ataataaaac	ctattgtata	aattttaatt	ttttttataa	atcatgaggt	2760
agtcctattt	tatttaagttt	atattattat	ttattaataa	atagggacga	tattttataat	2820
aatatgaaaa	gtatggatta	ctgtaataat	tataagaata	atttatatga	gattatttcag	2880
aaaataaatt	taaatatatt	tagaagtaat	cttgagtatt	atgatttttat	taatttttgt	2940
gtagataaat	ataatagttt	aaaaaggaat	attacaaaaa	tcggtacatg	tagaaataag	3000
gatacttcat	ataatgatga	agaaaaaata	atacactactg	atgataagag	atatgacaaa	3060
agatttatat	atttttaaaaa	tatatataat	atattatttt	ctaataatat	aattatcata	3120
cgagatagta	tacaaaaaatt	aaatgatgta	ttaaaaagtc	aggtatataa	taaaagaatg	3180
attaattatt	attggaatgt	ctatacaaaa	aagccatttaa	aaaaatttta	taaaatcatt	3240
tttttcaaaag	caggcaagat	gtttgtttcc	aaattttctt	tatttaattt	acatatcgaa	3300



caactaaaaa	agaaagaaaa	caatcaaaaat	tattcacatg	atacaaatga	ggaactatgt	3360
catcaaaagg	gacaacggaa	tgaagaagat	aacacatata	ataaaatggc	cattcgaaat	3420
aattttcttac	attctatatt	taataataat	aaatgtatta	aaacaaatag	aaaatttaca	3480
actaattcgt	taagatcagt	tgatgggtaaa	actaaagttc	tgaaaggagt	ttttaagaga	3540
aaatcggtta	gatggcagta	tcactaa				3567

&lt;210&gt; 251

&lt;211&gt; 1515

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 251

atgacgaaaa	gttcgaaaga	tatatgtagt	gagaatgagg	gaaagaagaa	tggaaagagc	60
ggatttttta	gtacatcggt	taaatatgta	ttatcagcat	gcatagcatc	atztatattt	120
ggttatcaag	tgagtgtgtt	aaatacaata	aagaatttta	tagttgtaga	atttgaatgg	180
tgtaaaggag	aaaaggatcg	attgaattgt	tccaataata	caattcagag	ttcatttttg	240
ttagcatcag	tatttatagg	tgctgtgtta	ggatgtgggt	tttctgggta	tttagtacia	300
tttggagaaa	ggttatcatt	attaataata	tataattttt	tctttttagt	aagtatttta	360
acgtccatta	ctcatcattt	ccataccata	ttatttgctc	gtttgttaag	tggttttggt	420
ataggccttag	ttaccgtaag	tgttcctatg	tatatatccg	agatgactca	taaagataag	480
aagggtgcgt	atgggtgtaat	gcatcaatta	tttataacat	ttggtatatt	tgtagctggt	540
atgttaggct	tagcaatggg	tgagggtcct	aaggctgatt	cgactgagcc	attaacttcg	600
ttcgctaaat	tatgggtggag	gcttatgttt	ttatttcctt	ctgtcatatc	attaataggt	660
atattagcct	tagttgtttt	ttttaaagaa	gaaaccccat	attttctttt	tgagaaagga	720
agaattgaag	aatccaaaaa	cattttgaaa	aaaattttatg	aaacagataa	tgtagatgaa	780
ccattgaatg	ctataaaaga	agctgttgaa	caaaatgaat	cagcaaagaa	aaattcttta	840
tctttattat	cagcattaaa	aatcccatca	tatagatatg	ttataatatt	aggatgtttg	900
ttatctgggt	tacaacaatt	tacagggtata	aatgttttag	tgtccaattc	aaatgaatta	960
tataaagaat	ttttagatag	tcattttaatt	accatattaa	gtgttgtaat	gacagctgtg	1020
aaactttttta	tgactttccc	agcaattttat	attgtagaaa	aattaggaag	gaaaacatta	1080
ttactatggg	gatgtgtagg	agtttttagtt	gcttattttac	ctacagcaat	tgctaatagaa	1140
ataaatagaa	attctaattt	tgttaaaaata	ctttccattg	tagcaacggt	tgttatgata	1200
atttcttttg	ctgtttctta	tggacctggt	ttatggattt	atttacatga	aatgtttcca	1260
tcagaaataa	aagatagtgc	tgcaagcttg	gcatcattag	ttaattgggt	ttgtgcaatt	1320
attgttgtct	tcccatcaga	cattattatt	aagaaatccc	cttcgattct	tttcatagtt	1380
ttttcagtca	tgtcaatttt	aaccttcttc	tttatttttt	tctttatcaa	agaaactaaa	1440
ggaggtgaaa	taggaacaag	tccatacata	actatggagg	agcgacaaaa	gcatatgacc	1500
aagtcggttg	tatga					1515

&lt;210&gt; 252

&lt;211&gt; 1251

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 252

atgataaaat	gtttgaagaa	taatataaat	atatggaaaa	gggtgcggcg	gaatgtgtca	60
tatggttatt	acaatataaa	tataaatgaa	aagatacata	aatatttcga	caatatagat	120
aagaagagaa	atataaaata	tataagtgat	tgtaagagtt	gtaaagaatg	tgtggatgaa	180
ataaaaaatg	gtaattataa	tttattaaaa	gatttcaata	tgaaaatgat	tgggttggt	240
atagaaggat	ataaaatagg	taaatatggt	attgtaagta	taatacagat	atggttatgaa	300
gatatatata	tttttgatat	atataaatgt	gataacgtat	atttatttat	aaattatata	360
aaagatatat	tggaaatgtga	tgatataata	aaagtaacac	atgattgtag	agaagattgt	420
tcgatattat	ataatcaata	taatatatcat	ttaaaaataa	tattagatac	acaagtagca	480
tataattttat	tattaaaaaa	taataataat	tatacaataa	cttatcaaat	tagttatgat	540
gattttattaa	aaaaatattt	atttataaat	aataatcata	aaatatattt	tcataaaatg	600
atcacactag	ataattatat	ttattttaag	aggcctatta	tgaaagaatt	aatttcatt	660
gctatccaag	atgtaatata	tttaaaacct	ttaatcttat	gtattttaga	ttaattcatt	720
ataaaaacaaa	agaaaaaaga	ggaacaggaa	aaaaataaat	atgtgaacga	caaacaaaaa	780
aataaaaataa	aacaggaaaa	attcgataaa	acttctaaca	cattacaaag	ttaaaggtaat	840
atctcttcat	ttaataatca	agacctctat	catactaaag	aaataattca	agatattata	900
ttacacagta	aaaaatacgt	gaactatcaa	tttttaaatt	ctcatataaa	agacgaaaaa	960
gaattacaga	aagggtatgat	cttagaagggt	atgggtgtat	catgtaataa	tacaaaaatg	1020
tatctttaa	taaatatgag	aaagaggggg	gtcattttta	attatgtaca	aaataaataa	1080
gaaataggag	atatagtaaa	ggctgttatt	gtaaacttta	ctagaaacga	ttatattaat	1140
ttaggacttt	atgatgagaa	aattttgact	cttgacgcgc	aaaaatatat	ccctcgcgag	1200
gaggttttac	aaaatatata	aaagtttctc	ctaaatgaag	aaaaaatata	a	1251

<210> 253  
 <211> 1065  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 253  
 atgaagatta caaaaataat taattataac aattttaaga ttacaaatgt atggggaggc 60  
 ataataagta aagcgtcaca ttttagtact cagcatggac aatatgataa gagtgaaagg 120  
 atttgaatt ttggattcca aaaagtaagc gaagaaataa aatctcgatt agtctacaat 180  
 ttatttagta acgtatgtaa taaatatgat attatgaatg acatgatgag tttgctggta 240  
 caccgttttt ggaaagatca atttgttaaa gaattagata tacttttaaa atatcatagt 300  
 tacaatatac aagattatgt atatcaacat tataaagatc attcatcaaa caatgaaaag 360  
 atacaaaaaa aaaatgaaaa cacatctgat acgaatgggt atagtaataa ttatagtgtgta 420  
 tattcagata tacctaatta taaaatacta gacttagcag gaggtactgg tgatattgcc 480  
 tttcgtatat tagaaaaaag taaattttat cttaaaaaaa ataatcaatc cattcctttt 540  
 gatcatatat cctatcaaca atatcttctt catatcatcg tttgtgatgt aaacaatgat 600  
 atgttaaatg ttggtaaaaa gaaagcagct acattaggat atgatcaaaa atgactttgg 660  
 ctagttcaaa atgcagaaaa tcttgaatca gtagaatcca attctataga tgtaataaca 720  
 ttatcatttg gtattagaaa ttttacaat attcctcaag cattaaaaga aatacatcga 780  
 gtattaaaac caggaggaag attccttatgt ttagaattta gtaaagtaca atgtcatata 840  
 ttttaatttt tctataaatt ttatcttaat aatgtaatac ctataattgg aaaagtagta 900  
 gcaaatgata tgaaggcata taaatattta gcagaaagta ttcaaaactt tctcacacca 960  
 gatgaattag ctcaattatt tcatcaagcc aatttttaaa atataacgta cagcaccatg 1020  
 acaatgggca tcgtttctat acattcagca tacaagttgg tgtaa 1065

<210> 254  
 <211> 1527  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 254  
 atggggctac ctaagaataa caaagttaac ttttgttatg gaaaagatta tagacacatt 60  
 tcaagagaac tagaaaggat taataatatc attttaaaat atagtaaaaa catagaaaca 120  
 tgtaataaga ataaaaaaaa atgcttagat gaattgtata tattagcaag ttatgataat 180  
 tttttaaaaa aaaaatatga aacgtatgaa tgtaagttag acggatatat aaatgaagat 240  
 aaagaaaaaga ttaaaataaa tgaagttaat aaaggaagaa ataaaaaaaa cgactgtact 300  
 cctaataata ataaaaatatt tttttataat gtccatttaa taaatgatga tgatcttttt 360  
 aagagaagaa aaaataaaaa aaagaaaaag aaaatgataa ccttaaagat aaataaatgt 420  
 aaccataaag ataaaaatatt acataaaaaat gagatgaaa atggtgatca tgttttttca 480  
 tataactaaa agaagtgggt gaataataat aataataata ataataattac aaatatgggtc 540  
 tcitttttgg gttatggaaa tataaaaaaga aagtatgtaa caaataaatg tattataaat 600  
 gaacaagaaa ataataagat ggatgagaat caacatatg ataaaaataa aaatattaat 660  
 attaatatca atttcatga tgataagaac gatgaaataa gaaaacattc aaccatacaa 720  
 acactttatc atagtaataa taaagaaaaag ataatttcaa aaaatgttct aaaagatgaa 780  
 agtacaaata taacaaaaaga atgtaattgt aataaatatg atgataatat tatagatcac 840  
 aaacaaaaac acagggaaaa agaaaaaaag aaaagtatcg aaaatatgaa tataagccat 900  
 ataatatatg aaaaagaaca atctcatgac atttgtaatg tattagaaga aaataaagag 960  
 gaagaaaaat ataacaattt acaaaaagat gttataacaa attgtaataa tgataaggta 1020  
 aaacttgaag aatatcatca tgaaaaagaa ttgaataatg ttcaaattat aaatgatatg 1080  
 gatattaaaa agaattgagg aaagaaggaa aaaaataata aaaaaaagga aaacaaaaaa 1140  
 aataagaaaa atgaaaaaga aaaaaataaa aaaaaggaaa aagaaaaaaa taaaaaaaag 1200  
 gaaaaagaaa aaaataaaaa aaaggaaaaa gaaaaaagta agaaaaagga aaaagaaaaa 1260  
 aataaaaaaa aggaaaaaga aaaaaataaa aaaaaggaaa aagaaaaaaa taacggtgat 1320  
 gtattaaaaac atgtggaaaa caatctacaa gatgtggaa tattgtatga agaaaaata 1380  
 ataaatgtca ataccaaaa agatgaagaa ttaagtacaa aaaataaata tagtgaaaaa 1440  
 gatattgttc atgatattct cagtgaatat tccaatacat tacaatatac aagtttctct 1500  
 gattatatga aaaataggat ggaataa 1527

<210> 255  
 <211> 1941  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 255  
 atgtcgacta ttttaaat ttaaaatgta caaaataaaa tgaatacatt acatatataa 60  
 aactttatta tggaaaat ttaaaatgta caaaataaaa aacatgataa agacatcaat 120  
 aatttgatga gaagaattga acatgaagaa attaaagaac ttatatcgta aaatgggaaa 180  
 aggtatttta tggaaataa gaaataat ttaaaatgta caaaataaaa taaggaggga 240



tatttttcctt	cttctaataa	agatgtttta	aaaaagcaga	gttttaaaaag	aaataaaaaa	300
ataaagaatt	tgttacaaga	atcgattaaa	aaaaaaaaa	tacagattca	aaaattactt	360
aaacaatata	ttatattgaa	aggatactat	aagaatgttt	gtaaaaagta	tagacaggaa	420
aatgaacttt	taaaaagttt	cttttccttt	tctaataatc	aaagttatta	tttaaatcta	480
aaatattctc	ctccacatag	tagaagaaat	cgtatatatt	tttatcctta	tacaaaattg	540
ttgagacgga	aaaggttgag	gaggatctca	catttttaaag	aggatagata	tgttattcac	600
aaagggtccac	taacaaaaaa	aaaaaaaaa	aaaatataca	taaataaaaa	atatatatat	660
attatatata	tatatatata	tatatattat	atatttttta	tgtttttattc	ttttattttt	720
atagaatatt	tttcaaactc	catatttaga	aaatataccc	atcataagaa	aagatatata	780
gaaattatac	aagatatatt	gaacgataac	aaactactaa	atctacattt	taaaagggtat	840
aaggaaaaat	ataaaaaaga	aaaaaagaaa	aaattgcaca	tatcttctaa	aaggaagaag	900
gataaaagaa	acttggacct	atattgtaaa	aaaaaaaaa	aagaaattat	atacacacat	960
ttgtttttac	ctacgagatt	aagggaaaaa	ataaacaaaa	gttcaaatta	taattattta	1020
aataaggaag	gggaaaaatat	tataaataag	gaagaggaaa	atattttaca	taaggaagag	1080
gaacatattt	tacataagga	tgaagagaat	tatatgaagg	aggaagaaga	aaatatttta	1140
cataaggatg	aagaggaaaa	tattttatat	aaggaggagg	aaaatatttt	acataaggat	1200
gaagaggaaa	acattttata	taaggaggag	gaaaatattt	tacataagga	tgaagaggaa	1260
aacattttac	ataaggaaga	ggaaaatatt	ttacataagg	atgaagaaga	aaatatttta	1320
tataaggagg	aggaaaatat	tttacataag	gaagaggcaa	atattataga	aacgaaaaat	1380
gcggaagtaa	aaaagaaaaa	aaacacatta	agaaaaaaga	aaaaaaaaga	aaaaaaaaat	1440
tttttaaatg	atcatatgaa	ggaagt tact	aagaatgatg	atgatgatga	tgatgatgat	1500
gatgatgatg	aaaataatat	gataaaggta	gaagaaaaac	aaaaatataa	tgatgaagat	1560
ggaaaggaaa	atgtgagtat	agataatgta	gaagagtgtg	acaaaatgaa	ggatgaaat	1620
gataagaagg	aaaacaatgt	ttctaataa	gagaagaaa	atattatctt	ggattcaaaa	1680
gagcaaaaaa	ttattctcga	tacaaacaaa	gagaagttaa	tctcaaagga	aaaaaaaaaa	1740
aaaaaaaaata	gtagaaaaat	aaaaaaaaact	aaaatagaag	ataataagga	tattaaagaa	1800
aatgaaaatt	ttaatgaaat	ttatgatgag	aaaaatatag	ggaaaaaaga	agagtatatc	1860
atatatgagg	aaaaaaataa	agagcataat	gtaattacgc	agaaagacaa	tgcgaaaatg	1920
gataatatag	atgagcaata	a				1941

&lt;210&gt; 256

&lt;211&gt; 1452

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 256

atggaaaaaa	aaattgatta	taatatacaag	agagataatt	tatttagaac	taataatgta	60
gataagaaaa	aggggtgaaga	gaaaaagaaa	gatctcattt	ccaaaaaaaa	taaaaataaa	120
gataattctc	caaataacaa	taataaaaaat	aatgataaga	ataatattaa	gaataatgtg	180
ttgaaaaata	attccttatt	taataataaa	aaaaaaaaaac	attaccttta	tgatgttgat	240
aagactttat	taaataaaga	tatgaattgc	attaattata	catataaaaa	ccttaacgag	300
caaaaaacaa	attctccaaa	tacaataaat	gttaatatata	atgataagga	ttgtgatgat	360
aaccaaaaaa	ttatggatat	attttctata	gaaaaaaaaa	taaaaataaa	atatatccca	420
aataaaaaatc	atatgaataa	atataataat	aataatgatc	aaaataaatc	agacgataat	480
tttgttcatt	caataattca	tgataccttt	ttaaatacat	ctcttcaaac	aactcataaa	540
aacactttga	caagtataaa	aataaacaaa	ggtgttaaaa	aaaagacttt	tacacacaaa	600
gataaaaaat	attataatga	tgataatata	aaaacaaaag	aaaacaaaaa	aaataaaaatc	660
aataataatt	atacaaatga	tgataataat	attatgataa	aaaataatta	tgtaaatata	720
agtaaatgat	gtcaaaaatat	ttataatggt	aatataaaaa	aaaataatta	tgtaaatata	780
agtataaata	ctcacctaca	aaataataat	tatgaaataa	aaggaaatca	taaaaaggaa	840
aaatcattca	aagattgtaa	aaaagaatta	tatacaaatg	taaaagataa	aattacatta	900
caacataaag	aaaataaaaa	atatatagat	aattctatac	aaagcattct	aatcataat	960
gaacatagat	ctcttcaaaa	aaacattcat	atatataata	ataaacatac	acaaactaat	1020
aaagcttata	atattcaaga	ggtgcataat	ttttctataa	tttattctaa	acaaatttta	1080
caaacagcct	taatacaaat	aacatataaa	caaaatgtaa	accaaataaa	aaacaaaaaa	1140
gaagaaatta	taataaatga	tcaaattaat	aaacttaact	tttctatatt	aacaacacgt	1200
caacaaaaata	atctccacat	tatgaatata	aacaaatcaa	tccatggagt	tctacaaata	1260
tttaacaaaa	taaatacatt	cgccatgtcc	aataacataa	ttaatatttt	gatcaagaaa	1320
aatgttgaaa	cttataatga	ggtaaaaaaa	aaaaaaaaaa	aaaaaaaaag	aaaaaaaaaa	1380
gaaagaaaga	aaaaaaaaaa	aaaaaaagta	tatgattatc	acatatgtat	gtttccttat	1440
attccaattt	aa					1452

&lt;210&gt; 257

&lt;211&gt; 1380

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 257

atgcagatga	atgaagagaa	tattattacg	aggaagataa	attgtctgag	aagtacat	60
gaagaaaaaa	aattaagata	taatgatgat	gatatgataa	ataagaatta	tgaagagatg	120
cttgataaaa	ttgaagaatg	tataaagtta	agaaatggat	ataaaatgat	ttttgtttta	180
aaaatatcgc	aaatacctct	tgacatttat	gttattgaca	atattaatga	aaatgatgta	240
agaaggatga	taaaaaagaa	aaatagttaa	aataataata	tattaaaacc	atttgaacaa	300
ttaatattag	atcattttta	tattataaaa	atattatgta	ataaaaataa	tattaatgg	360
gatactttta	taaatacaag	ttgtaaattc	ttatctactt	ttcttcaaat	ttattgtgat	420
aatttatggg	tattaccata	tttattaacc	atttgcctcat	ttttaataaa	tataagtaca	480
ttagccgatt	cctatattac	tagtaataaa	aatgatatat	ataatgaaga	aaacgaagat	540
ataaataata	aaaataaata	tactattgaa	gtcctaaatt	ctattagagg	aaaaataggt	600
attgttaaag	gagatataga	aaaacatggg	ggatttggtta	tattaatggt	ccaatccata	660
aaatttatga	tgaaattaaa	taatatgcaa	atcacatcaa	gctttctaaa	aattataaac	720
tctacagata	ttaatatttc	atatatacca	acatctttta	tcgtttttatt	caaaaaccaa	780
ttaggaaaat	tgtattttaca	aaagctagaa	tatgaaaaag	cagaaagtga	attcatttgg	840
gcatttttcta	attcaaataa	aagcaaaatt	gaatttagaa	aaatcattct	tgaatctcta	900
ataaccataa	gattaaataa	aggtttatat	ccacccaaaa	aattattaca	aaaatataaa	960
ctttcaatct	atatagatat	tatttattcc	ataaaaagag	gaaatatttt	cttatataat	1020
aatgttatga	ataacttttc	tagttatttc	tttcataaag	gtttaaacga	atgtatagaa	1080
caaattctatt	ttattgttaa	aagaaatctt	atcaaaattg	ttgtagattg	gtggaataaa	1140
atggttcaag	aaaataatca	acaaaataaa	ttatataaag	tacctattta	tttatttcat	1200
catattttca	aatgggcaca	tataacacaa	catcattcat	atttagaaac	tatatgtatt	1260
ataacatcac	ttatcttatt	tcgttatatt	aatgcatata	tatcttatga	taataatata	1320
ttggtcttga	gtaaaaatga	cccattccca	tccctttccc	acaaccaagg	gccacgctag	1380

&lt;210&gt; 258

&lt;211&gt; 399

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 258

atggcacaata	atatcaatgg	agatataaaa	aatttagacc	ttggtcctga	ttttaagaat	60
tgtaaatgtt	tgaaatttatg	tgagcttcaa	ttaattttgg	gagaccagct	tcgattaaca	120
tccaagagaa	atgaagaagc	tcaagcattg	attaaatcgt	cctatgatta	tgccaataaaa	180
tttgctgcaa	taaaaaatag	aagttcaatt	gtcgatatta	gaactaactt	agaacgtata	240
ggcgattttac	atgaatatga	aatagccatg	ttagttaatc	ttttacctaa	gaccatatta	300
gaagcttagat	atttaattcc	ttcgtttaatt	cgtttaaatg	acgaaaacctt	aaattctatt	360
ttagaacatc	ttataagcta	taaaatgtac	gtttctttaa			399

&lt;210&gt; 259

&lt;211&gt; 1908

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 259

atgggggttcg	ttaaggctga	agagttcata	aatcactaca	tgagagttaa	caaagaaata	60
aaagaactat	ctaatagaaa	gaatgaagag	tttaaattta	acatttttat	attttattac	120
aacaatatcg	attctatatg	tacggaacat	atttaccatt	tccataagaa	cttgaaaaagg	180
gaaattaatg	tatttagtta	tggtgttgag	aaaaaagaag	acttaataaa	attttttaat	240
aaacataatg	atatatatcc	aaaaaataaa	gattattatc	gtgattattt	ctttcaagta	300
atattaatag	gtatatgttc	acataataat	acagatacaa	gtatatatga	agatatcgaa	360
aagtttttta	gtaattttatt	aagtaaaaca	tatttaggtt	atttaaaatt	ttttgttata	420
gataataaaa	gaccattttca	tgaaatcttt	tttaataatg	ataaatggga	actagtattg	480
aatgaattag	aacataatga	aattatgaca	atttataata	ataaaaaaaa	taagtataag	540
aaaaagttgt	attctaaatt	ttatgataat	tatttatatg	tgaaagaaga	aaataaatgt	600
ttatcgttaa	tggtatatcc	atttatacaa	tgtgctgggtg	aagatgatgc	atcagcaatt	660
atattttatt	ctagtatatc	cttaatgtcc	tatttaaaaa	ctgaacaaat	tacatatgat	720
tattataata	aagaaataaa	aaattttacat	aatgattcct	taaatatatt	taatggacat	780
tttttatcat	tcgattcaga	gagaggggta	ctacctatgt	tatcatttat	atcattaaac	840
gaagccttag	aaatagatga	acgtatatat	atatatgatc	ataaaaatgt	taaaaataca	900
tttaaccaaa	tacgaacgat	gtgccaataa	gaaattaaag	attttactgg	attttactga	960
caactagatt	taaaaaaaca	aaatgaaata	ttataaaaa	taaaaaactt	tattaaaaata	1020
ataaaacctt	tgaatacatt	agcttggaag	agaagaacat	atgttctata	taatagtgat	1080
agtttctatt	tcttaattat	actcatatcat	atatatatta	atcgaattaa	aaaaatggat	1140
acatatctat	ataattgttt	aaaaacatca	gattttcttgt	ataatatatta	taaagataga	1200
ttaaaacaat	cagaaatata	tgataaaact	attgaaaaac	atttacataa	aaatgcagca	1260
aattatttaa	gtatacttat	caaaaaagtt	atggaaaagtc	ataaaaaatc	cataaccata	1320
acatctactt	ttaaaatata	tatggatatt	ttccaaacac	caagaaactc	atatacacat	1380
ccatttgaat	taaaactaat	atccaatatg	ttctcttctt	tccagtcata	ttgtgttgat	1440

aaatataaaa cctatcatct tattgtatgt aatataatcg attcggacga taccatatta 1500  
 tatggtttcg caccttttaa taagagagac tactggcccc tcatattttc gaaaatagct 1560  
 tatacaaatg ccgaacaaat taattatgac acattaactg atgtaaatac tataaaaaata 1620  
 agaaaaacag atttgaaatt ttactatgat gaaattaagg atgtattcag gggaattatt 1680  
 aaacatgatt ataaaaagga actacaagcc aacctaaaag gcaaccacga tgatgaagat 1740  
 gaagatgaag aagatgatga agaaaatgaa gagcaagaac tagaagaaga cgatataatt 1800  
 gaagaggatt tgttggggga tcagcaagat gaagatttga tggaccaaaa tgctaacct 1860  
 catgaaattc atgaagatga cgacaacgaa catactgagc ccaactag 1908

&lt;210&gt; 260

&lt;211&gt; 279

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 260

atgaatgaac tcctaaatag taacgccacc atcatttcta ataacatccc tattcatatt 60  
 aatcgttttg aaattactga aatatttagt aaatatgggc ctttattagg tcaaggcata 120  
 tatttttgaa aaaaaaacag caactttttt tttgtaaaat atgttcatct taaggatgca 180  
 ataaaagctt acgaagaatg tgaacatgat tttaaattat catttagcaa aaatgatgag 240  
 ataaaatata aagcttttaa aggttaattca cataaatga 279

&lt;210&gt; 261

&lt;211&gt; 2880

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 261

atgacagcag aggataaaaa ggtaaacagc aaagtaagaa aattgaataa ttcaaaaaata 60  
 aaaaaggaag aattaaacga agaagaaaag aagaagaaag agaattaga attattaatt 120  
 acaagattaa gagatgaaga tgtaaatggt gtaaatgtgt cgattagttt attaaataaa 180  
 gaaattatag atacaagtgg tatattaaca tcactgttat tagcattaaa ggtattaaaa 240  
 acacattata atacgttaat agaaatattt aatgaaatga tatttgaaga atgtaaaaaa 300  
 aagtttaagta atatgatcag tgcattatct acaaccatag gagatgaaaa taatattgta 360  
 aaatttggtta tcacaggaaa taaacatgat ttaatttaatt atggacatga atatatataaa 420  
 aatttaataa cgaaattggt agttgaatat aaaatattaa aagaagaaga aaataatcaa 480  
 aatggcctaa caacaacaag tacaacaagt aacaaacttg ttacaataaa tcatatatac 540  
 gatatagtaa atattgttgt accctattgt tttgcacata atacagaata tgaagctatt 600  
 gatttattaa tagaagttga taaaattaat gatatttatt tatatgtaga tgaaaaatct 660  
 tgtgacagat caatattgta tctattaaat ttaacacatt atagttcatc cacagatgaa 720  
 tattataaac taatggatgt tatttttaaat atttttaaaaa aacataataa acatgtagaa 780  
 tgttttaaaaa tattattgag attaaataaa attgataaaa ttaaagatct tattttttgaa 840  
 tgtaattgata ttttaatatg taaacaaata gcacttatat gctcaagaca ttgtgtacat 900  
 atacaattca cagaagaaga aattaaaaaa tatacacatc ttaattttaa tgaaatctcc 960  
 accttaacat caggagaaca tttatctccc atatttttaa aattagcaaa agatcttgat 1020  
 gtccaagaac ccaaattacc ggaggatgta tataaatcac atcttgaaga aaaaagaaat 1080  
 acaactgtat gggattcagc taaacaaaat ctatcttcga catttggtta tgcatattgta 1140  
 aatgctgctt tttgtaaaga taaattaatg acggttaatt cttcattatg gattttttaa 1200  
 aataaagatt atggtttaatt gagtgcact gcacttatgg gattattatt aatgtggaac 1260  
 ctagatgaag gattatcaca aatagataaa tttcaatata gtagtgatca atagtgtgaa 1320  
 gcagggtgct taatggcctt tggattagca tttaccaata taaaaaatga atgtgatcca 1380  
 gcttatgcct tgttatctga acatatagat gctgaaaatg cattagaaaa aatgggagct 1440  
 atattaggat ttggttatgc ttatgcagggt actaatagag agaacttatt agatattcta 1500  
 ataccaccat tagttgataa tggttgtatt attgaatgta gtgtatatgc agctttatcc 1560  
 ttaggattag tttttgttgg atcacagaat agagaaattg ctgaatatat aatagatacc 1620  
 gtcttagaaa aagaaaaaat taacaattct ttagatactc ctatagctaa attatattcg 1680  
 gttgcattga gactgttatt tttatgttca agagaaaaat gtgaagctac cttatccgct 1740  
 ttagaaatta ttaagcatcc tattttcaaaa tatatgatag caacagtaga aggtatggct 1800  
 tttgctggat ctaatgatgt tttaaaagtt caaaaaatgt tacaagtatt agttgaaaaa 1860  
 agagggtgata aaaaaaataa ttccgataat aaaacaacaa cagcaaataa tacagataat 1920  
 aataaaagtt ctaatgctga tataaataaa actactacta cagatacttc aaaaaaacg 1980  
 gataacaata ataataatag tagtagtaac aataagaata caaaaagtaa tgaagaaaaa 2040  
 agttcatcta gtaaaaaatta tgtggaagat aatttagatc aatgtgtagc tatttttaatt 2100  
 attgcactta ttgctttaac tgatgatatt agttcagata tgactaccag aattattgat 2160  
 cactttttac aataattcaaa tgtaaatcaa aaaaaagcag taccattagc actagcctta 2220  
 ctattttacat cctttccaaa accaaatatt gtagatattt tatcaaaatt aacacatgat 2280  
 caagatcctg atgttgcat gcatgcaata atttctctag gatttgttgg agcgggaaca 2340  
 aataattcaa gaatagctat cttattaaga caattatctg cattttattg taaagatacc 2400  
 aatgctattt ttgttgtaag attagctcaa ggattgttat atatgggtaa aggtttacta 2460

actattaatc	cactacattc	aaatcggttc	ataattaatt	atgtctcctt	aggatctctt	2520
ttaataacaa	ttcatgcctg	tttacaatta	aaatctacta	tcctaggaaa	atatcattac	2580
ttattgtatc	atttgggttc	ttgcatttac	ccaagaatgc	ttgtaacggt	taatgagaaa	2640
ttggagtctc	ttcctgtgtc	tggtcgtgtt	ggacaggccg	ttgacattgt	tggaacaaga	2700
ggaaaaccca	aaacaataac	aggatttcaa	acacacggtt	cacctgtgtt	attatcgcat	2760
actgatagag	ctgaaatggc	cacagaagaa	tgtaaggatt	atataatccg	caatgatacc	2820
ttagaaggta	ttgtcattct	taaaaaggat	ccaaactaca	tcccaccatc	cataaattaa	2880

&lt;210&gt; 262

&lt;211&gt; 4551

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 262

atgggtgtta	aaggctctttg	gtccattgtga	tctcctgtag	gtgttcgggt	taatccccgag	60
atttttacag	ggaaaagaat	agcaattgat	gtagtatat	ggttatatga	actgacctat	120
gctaataacg	tgaaagactt	acgaaaataaa	tcttttgata	acatgagcat	attcaatgat	180
ttgtggatag	atttttctga	aaatatatct	agtgaataaa	aaacagataa	tattaaaaaa	240
gcacatcttt	attttttttt	tttaagaata	tgtaaattat	tgtattataa	tataagaccg	300
atattttatat	ttgatggcaa	cccaccagaa	ttaaaaagga	aaactatatt	tcaaagaaac	360
attaagaaaa	ggaattatga	agaaaaat	aaaaaaacag	ctgaaaagct	tgtttataat	420
tattatcaaa	ggacattatt	gaattctatg	aaaagtataa	ataaaaagaa	tgacaactca	480
aataatatag	aagataaaac	aaacacacca	aataaaaaca	acacacaaaa	taaatcaaac	540
acacaaaaata	aatcaaacac	accaaataaa	atcaatgccg	atatatcaaa	aagtagttta	600
atacaaatat	atgatgatat	taaagagaaa	gataagtcgt	taaacagttt	agtagagcac	660
gttggaatg	tgctgtgtgag	tgtaaggat	gttctaacta	tatgtaatga	tgatttaagt	720
aaaataaaga	ataaaatatt	tatgataaca	gattttgggtc	ctgttctttt	tttgggtgaa	780
caagatgggt	atatgggtac	tgtggagaac	ataaacaaat	tagacaatag	aaataaagat	840
gaaaataaatt	tatcttattc	cataaattat	aataaagtac	aagatgttaa	taacaacaat	900
gatgacgata	aagataaaga	taaagaaaat	attaatgaag	tacggagaga	tcaaaaaaat	960
tatgtatata	aaaataaaga	aaatattaat	aatatatata	ttgatgatga	tgatgaaaag	1020
gaagatatata	aaaataaaaa	tggtgtatat	aataatgatg	atattgatga	acaaataata	1080
cgaaaaaaac	atatggctag	aaaaaaatat	tatgaaagca	tacaaaaaac	gtttaagggg	1140
ttttttatga	tgagaagacc	tgtagatat	attgatatta	gtaattataa	tacggaaatg	1200
ttggaaattt	cagaacacatt	aaaagtacat	gaaaataaat	ttaagcaaca	tcttaattgt	1260
ttagatgaaa	ataatagtac	acctgtagta	aatatgaatt	tattaaaaaa	tattaattat	1320
aaaaaaaatg	acgatttaat	tgaaggagga	gaaaagaaat	catttattaa	tttgataaat	1380
gtggattcgt	gttatagtag	tagtaatagt	agacttgaaa	atgatgagaa	tattgaaagg	1440
gggaaaaata	atatgtttat	tacaaatgat	gagaaatcta	ttaatatata	taattacaat	1500
aataataata	ataataataa	taataataat	aatgataata	atatggataa	taattgatga	1560
attatagaac	acaataaaaa	caatatgaat	atatatgata	ataaatataa	tgtggaatgt	1620
agttcagaaa	aaataaatga	taatgggata	agtaataaaa	atattaatat	attagaatta	1680
ccaaataatt	tagatacatc	taatatattt	ttagaaggaa	aagatgaata	taaagtttat	1740
tatgttaaca	aagaagaaat	acggattcca	ttattcaaa	aaattaataa	agaaattttt	1800
gaaaagttac	ctttgaaatt	acagtatcaa	atattacaag	atataaaaga	agaatgggat	1860
actgataata	gaatcaaagc	aataaaatca	aaagacgata	tggtgtttt	ttcacaagta	1920
caattgaaaa	catatgtaag	aatgatttaa	accgattttg	aaatcgaaaa	attaaaaata	1980
aaaatggctg	aaaatattca	aagtgtagaa	ggagaatttat	taataaataa	agatttatca	2040
aaaaatacag	acaatattaa	tataaaagat	tataatgttt	tacaaaaaaa	aaaatccaaa	2100
aaaaaaaaaa	aaaaatttct	aatgacata	ttaaatacat	ataattttac	tactgaaagt	2160
aaatatcagg	atctatatgt	taaaggggaa	gaatcaaaa	aagatattaa	aaaccaaat	2220
gatttcgtta	cacaggaatg	ttatcgaaat	aatgatatta	taagagatac	gcattgataa	2280
tctgatata	ttaaaaaat	taaaatagat	aataataaaa	aatatgaaat	ttataattta	2340
gagcttgaac	aagaagaaat	taatgaaaaa	aaaaattata	ataaaaaata	taattgatgt	2400
aacaaaacgt	tcttttttaa	aatagagaat	gaatttaaaa	aagacctttt	attagatgat	2460
agccaaattt	ttggtgatag	ccttttagct	gatataaaag	aatataatta	tactgctgat	2520
aatttggtga	ataataatga	aaacaaaagt	ttatatgaag	atggcgaaaa	ttttataact	2580
aggaatgagc	ctattacaaa	tgaatatgaa	gaaaaaaata	acataatata	catatcagat	2640
gaacaaaaat	ataatgaaga	agatattata	tttaaagaca	aaataaagga	aaaagagaaa	2700
aacaagtata	catcaagtga	tgattttgaa	aattgtagt	tacaggaaaa	aatatgtata	2760
aatgaaaaaa	tagaagaata	taataataaa	aatgatgata	aatcatcttc	atcatcatcg	2820
attatattag	aagaaatcaa	atataaaaa	gaaaaaaaag	atgagctcgt	tagcccta	2880
ttgtgtgttc	tacttgatga	atttgagcat	tctaattgat	tgagagaata	ttatatttcc	2940
gtttcttctg	atgatatgaa	aaccaacgtg	agcaaaaaaca	atattacagg	agtaaaggaa	3000
aataaagtgg	acaaaaacaaa	tgtggagtat	gataaaaaag	gagatgatgg	ggtaatagaa	3060
atatcttttg	aggtagtca	taaattagaa	gagtcacaa	ttgatgataa	taacaatatt	3120
tatgataatg	atgacgaatt	agaaaaaaat	ttatcaaaag	attatatttc	ggatgttgat	3180
aaaaaccatg	taaataatat	atataatatc	gaacgagggg	aagatgaaag	agaaaacgaa	3240
ttttagagaa	ataaaataca	gtcgacagaa	tcacataaga	gtaattgaatt	tatatgtaca	3300

gaaaataaaa	gtttgagaaa	acaatatatg	agtaaagaag	atataagtaa	tgtgcgaata	3360
cttaaaagtg	atgatattaa	caatttgagt	aaacaaaatt	attttgaaat	attattagat	3420
aagaaacaag	ttatggataa	ttttcagatg	aatattgaac	aaaataatga	taaaataaaa	3480
gaagataaat	tagatgaagg	tgcttatttt	gaatatattag	aagataataa	aataattgat	3540
tcatatataa	aagaaacaaa	taaagaaaaat	gaagaattaa	taaaagaata	taaaaagttg	3600
aaaaaaaaata	atattgaaat	aaatgatgaa	atgaatgatg	atataaaaatt	attattaaat	3660
tttttttggt	tcccatatat	acaatctcca	tgtgaagcag	aagctcaatg	ttcatattta	3720
aataataaaa	attattgtga	tgctattatt	agtgatgatt	cggatgtttt	agtttttagt	3780
gggaaaacag	ttataaagaa	tttttttaat	aaaaaaaaaa	cagtcgaagt	ttatgaaaaa	3840
aaagctattg	aggaaaagtt	aggattgtat	caagaagaat	taattaatat	ttccttatta	3900
tgtggatgtg	attatacaat	aggtgtgcat	ggatataggta	ttgttaatgc	tttagaaata	3960
attaaagcct	ttccaaattt	tgaggattta	aaaatattaa	aagatattgt	atcgaaccct	4020
tttagaaaaa	tagataaaaa	tatgtataat	gaagaaatac	agcaattcct	aaatactcat	4080
aaaaattata	aacttaattg	gatattccca	aataattttc	ctgatagaga	agtctataaa	4140
tgttttaagt	atccaaaggt	atgtacagat	attaaaaaat	tcgaatggca	tgccctgat	4200
attaagagta	taacaaaatt	tttacataaa	actacaaata	tatcagaaga	aaaagttcct	4260
aatgtcctaa	acccaatttt	acaaaaatat	aatgttaatg	ttagaacata	tcaatcaaaa	4320
attgaggact	tctttccact	cttgagagaaa	aaaagaaaaa	ctgtagatga	tttaattgat	4380
catattagag	caataataaa	acaaaagaga	caaaaaaata	aaaccgttca	tttggatagt	4440
aaaatatcac	cattgattga	tataaatcca	gcaggaatta	tcaaatctaa	gagaatgtca	4500
tcggccttgg	atcatataaa	aaggagaaaa	tcaagcaaga	aaaaaaaaata	a	4551

&lt;210&gt; 263

&lt;211&gt; 402

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 263

atgggggaaaa	aaatttcctc	aatgcctgat	aaacataaaa	ttagacaaaa	tcaagttttg	60
gggtgtcaat	cggtagtata	tatttaccca	aaagtagaag	aaaatgaaga	taaaaaaaa	120
gttattaata	cagttttgtc	tttattatat	atataatat	ataatatatt	tttcttaaac	180
atgtactctt	tagacggatt	attgacaaaa	ggaatagtgt	acatatatac	tgacggctta	240
agtgggtata	tgcttgaaga	tattttaaaa	gtaaacccca	attttataac	acttactggg	300
atctcggaat	ttttaacaat	gagcagaata	aatggatatt	taaatattat	gaacaaaata	360
aaaatattct	gcaccaatat	attgaagaat	atggacaatt	aa		402

&lt;210&gt; 264

&lt;211&gt; 1704

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 264

atgataatgg	ctaaaaacca	gtatatggag	gatagaaata	ttagagaacc	taataacctta	60
ttaggggaag	aaactgaaca	actagtagat	tcattttcatt	atgaaaaata	ctcaagttct	120
attttataaaa	aagtgaattc	aaataggagt	aaaaatggaa	agcatagtat	ggcgtttcac	180
aaatcactgg	ctgttgtaaa	tgtagctgca	ggatagatga	gatgtgatga	tcaattattg	240
ccagcaagtt	ttagagcggt	agaagccgat	ttgaattttac	acccatcttt	attagggttat	300
ataacttttag	cacagacttt	aatgtttaagt	ttattttagtc	ctatatgggg	ttttttatca	360
gataaatatt	ctcgaaaatg	gatgttagta	tttggaaaccg	cattatgggg	agtagcaact	420
atattattgg	ctaacataaa	tgactttgct	catatattat	tttttagggc	aataaatgga	480
ttagcttttag	gtagtatagg	acctatatct	caaagtattt	tagcggatgc	tgcaaaaaat	540
gaatcttttag	gtttatcttt	tggttttagta	caattatcat	ctagtttggg	tagattgatt	600
ggaggggtgg	taacaacaac	cggtgcctta	aaatatttcg	gtggtattag	aggatggaga	660
ttatgtttta	tagttgtggg	tatattgagt	gttttgttaa	gtattatagt	ggcattgttt	720
gtagaggatg	cgcctagaca	ggttcgtaaa	aataaaaaaa	tggaactatt	agatggagaa	780
tctaatacta	atgctagtaa	taataataat	aatagtaata	ataataatat	taataataat	840
attaatatga	ataacagcct	tgataataat	aattctttca	ctggattaag	tcacagagat	900
acacgtactt	acatattata	tcagaacatt	gttgaattgt	tgaaagatag	tttatcaaaa	960
aaaagtatca	taattatcct	tttagaaggt	tttactggta	ctatttcctg	gctagcata	1020
agttttaata	caatgttttt	tcaatattgt	ggattaaagt	atttacaagc	agctataata	1080
acaggatttt	tattaatagg	ttcagctata	ggaggtgttg	taggaggtca	ttttgggtgat	1140
attatgcatg	atatatctaa	taagcatgga	agaccattat	tagggcagct	agctatgttt	1200
ggtagagtac	cattagtatt	attaatatac	ttagttatac	ctaaaagaaa	agaaagtttt	1260
gaattattcg	ccttatcatg	tttttgattt	ggtttatcat	caatagctgg	tgtagcagta	1320
aatagaccca	ttgtatcaga	tattataaga	ccagattata	gaggtactgt	attttcatta	1380
actatagcaa	tagaaggtgt	tggttcttcc	ttaattaggag	ctcctttggt	tggttattta	1440
gcagaaaaga	tattcaagta	tcaaaaataat	aatttattaa	tatctgatat	gccagaagat	1500
ataagaataa	ataatgcaca	agccttatcg	aaaacactct	tttatttaac	aataatccca	1560

tggatcttgt	catttatatt	ttatagttta	ttacatttta	catatggaaa	agaatattta	1620
aagatgaatg	aaattattca	aatgaatat	aagtatgatg	atgaagatga	agaaaccatt	1680
ccagaaaaaa	aatgtttaac	atga				1704

&lt;210&gt; 265

&lt;211&gt; 7620

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 265

atgaacaact	taaataatca	aacttgcaac	aaattaatta	ataactatta	taacaaaaaa	60
gagaataata	atgataagaa	cgatcatggg	aatagtcacc	cacaaggtaa	taataatcac	120
cagaataaac	aaaataatat	tctaataaat	agaaatacaa	aagaaacgaa	accattaaaa	180
ggaatacaca	caagggttaag	tacagtcaat	gttgggtatg	gaataaaaaga	tgctatagga	240
caaataattha	aatataaaca	taaatacaat	gaataattha	gatttaatat	attatgtgaa	300
ttaagaatat	tatacgaact	aaatataata	gatttaatat	atttattaga	ggtagaagaa	360
ataatgagga	gatataatat	gaaatatgaa	ataaacgaaa	cgtattttatc	tcttcatatt	420
aaagacgtaa	tacataatth	atatgtatct	aattatattg	tttacttaaa	ctatcttgtt	480
ttgttcaacc	ctgtacatat	aagtaaaaaa	aaaaaaaata	tacttatata	aatacctatg	540
gacataatat	tgaaggtatt	atgccccaat	gtttttatat	catcatataa	aaaaactaat	600
attattaata	ttaatgaaaa	tagcatctat	ttaatagatt	caagtataaa	ggagaatgat	660
cgtcctatgt	cttccaaaag	gaaaagagaa	agcaaatata	aaaagggttg	aaagaaaaaa	720
aatttctaagt	aaaaatgtga	taaaaagata	accaacgagg	taaccataac	aaacacagaa	780
ttaaacaatg	aagggtatcaa	agaagaaaca	aaggaattaa	ttaatgaagc	aaacaaccca	840
tcaatcaaaa	aagatacaac	cgaattcttc	ttagaacaaa	acatgaagag	gaaaaacatt	900
ttattaccac	acacaggcaa	caaactctga	agcatttcgag	ttatctatgc	aagttgtctt	960
agctcaaata	aaatataact	gagaaatata	aatatgtgtt	acgacgttgt	ggtgtttata	1020
aaaatattaa	gggacttaca	ctttcctatt	atgttgagg	gtagaaaaat	agataaatat	1080
attgataata	taataaatat	acaaaaaaaa	gtatatcag	aagaaatgga	aaaaattgat	1140
gatgaaaaac	gtttttacgag	tgtagaatcc	ataaataatt	catttaatat	aaataaatatg	1200
gaaaatatat	ttcgtatata	aaacgtaagc	tatctagaac	gtgtggccat	attggaatgt	1260
aaaaaatact	gtaaaggaga	aaagaaatat	aagtataata	actttaataa	gaatcataga	1320
atcaaaaaga	agaaatgcaa	tgtttgtaaa	tgtacagaac	aagagaaaaa	aaatttaggg	1380
aaaatatcga	aggaatatat	gacggcatgt	attgaacatt	catcattatc	ataatttctt	1440
ttaaaaaaag	aaaaaaacgt	aattataatt	gaaggaaatg	tagataaaaag	tgatacatta	1500
tttaaaaact	ttgtcttcaa	aaaaaaagtt	atattaaatg	tttataattg	tggaactgta	1560
tgtcgtttta	tattaccact	cttatgttta	tatatatgta	aacaaaatat	aaaagcacaa	1620
gaagaaaata	aaacaaaaat	taaataatata	atattaaaag	gatgtaaaac	aatggaaaat	1680
gtacgtatta	tacatccatt	agtaaattgtt	ttaagaaaat	gcttcaaata	tataaaaaata	1740
aaatatttha	aaaaaaaaca	ttattttacct	atatccatat	caatcaaaaa	gcatatatta	1800
aatataacac	atcatgatat	attcttaacc	aaacaaatth	atgttgataa	ttattattca	1860
agtcatttta	tttcatcctt	acttttaatt	tcgccttttt	caaaaaataa	cacaaaacta	1920
tgtttaaact	ataaacattc	gtataaaaaca	aaaaatatga	taaacatga	ttatacaaat	1980
aaatatatta	taaacaaaaca	aaaaaatata	ttttacaata	atattaaaaa	taatattaaa	2040
tataaaatta	ggtatctata	taatatatct	caccaggaaa	aaaaaaaaaa	aaaaaaactt	2100
acattcttta	aaaaatatat	gttaaaaaag	gaatgtcttt	taaaaaactc	gatttttaatt	2160
aaattaatta	ttcctcatga	ttgtaaaaag	ggtaacctga	tacttaacca	aaatattcat	2220
ttaaatgaag	aaaacaaaaa	tgacataaac	acaaaaataa	acaacaacaa	caataataat	2280
aataataata	ataataataa	taaagtgaat	aaccaaatat	gtgtacaaca	taaactccca	2340
tgtgattata	cattttacca	aaatataaag	aaagaagatt	acaaacaatg	tgggctatth	2400
aataccacgt	caaaagcatt	catagatatg	actttgtatg	ttatgaggac	ttgggggaata	2460
catattaaag	tgaatcataa	aggaatatat	tatgtacaaa	aaaaagaaat	gtaccaatta	2520
tatgacgata	ataataataa	taataataat	aataataaga	gtgatataatg	tttaaatcgt	2580
gttaacccta	ataaatgttc	ttcagaaaaa	aagacaaaaca	atccgaactc	ttcaagtatt	2640
ctcaaaaaag	acaaagagaa	aaaaaaaaaac	caaatggacg	gcaaaaattgt	aacaaatttg	2700
gtgaaggggg	ataataagga	agaagaagga	aataataata	tcataaagaa	tgatgatagt	2760
gcgtcgaaag	gtactaatga	acatatgatg	caaaggataa	atgatgcaga	gacaacacaa	2820
aataatacat	tgcataaaga	gaacaaatta	tgtacgacaa	aagatcaaaa	taaaatacat	2880
acaaaaataa	actcaaaaaga	aatgagaaa	gtaaagaaat	actattatta	tcatattaat	2940
aatgatttag	gtttataact	ttatttcctt	gtaggattta	taattaaaaa	aaagaattgt	3000
accatttctt	taaaattaaa	tattaataat	ttaaatgtga	aatacaaagg	aaataatatt	3060
tacaaaaata	aaacagtcatt	gtatcaaaaa	gacatatata	attattatct	ccttaatat	3120
cttttattag	ttggtgtaaa	aatatatata	agacaacata	ataaattaaa	taaagaaagt	3180
gaatataatg	taaattctca	aaatttaata	ggttctaaaa	gtaaaagtag	taaaatatat	3240
atggttcatt	ttataacatc	tgagattagt	tttaataaaa	aaaaaatatt	aagaccattt	3300
tataaaatac	aaaaaaaaat	aaataataaa	tataaaagga	ttattatgaa	tcaaagtgca	3360
catataaata	taaaagaatc	taaaaataat	attatttcaa	ataatgtgga	agaaaaaaat	3420
tccgttaccat	ccaatatagt	atctaataat	tcatctaata	atatatcacc	ttattataaa	3480
tccataaaaag	aaaacaataa	aatgaaaaaa	actaataatt	gtatagaaca	catttttaaat	3540



aattataaaa	taaaatataa	tatatatgaa	aagatttata	taaaatatga	aacaaataat	3600
aatcatatgt	tgagcttcaa	aattggtata	gatgctgaat	ctttttcaga	tgatttcttt	3660
tctatatgta	ttttatttag	tcatttcata	ttatctaata	ttaatgaaaa	tataattttt	3720
aaaaataaaa	atatacataa	tcaaaatatt	aaagaatcta	ctagaatata	tcatgtagta	3780
tttatattaa	aattattttt	tcataattta	ttattttatat	cttgactata	taatagtata	3840
tatataacta	aaatgttaca	tccttttcaa	aatattcaat	tttacagata	taaaaaaaat	3900
ataagaacaa	ataatcaaaa	aatatataat	acaaattata	ttcataacaa	atatgaaaaa	3960
attcaaaaatt	ttgttaataa	ttctaaatat	gtttattaatg	atatgcaatc	tttatatcta	4020
tatgtagaca	cacaaaatga	tcacatgaat	atttttatgt	caaccatctt	atctcttata	4080
ttcaaaaata	taataattcc	aaaatgcat	aagggtacata	aaagtttccc	attatttttt	4140
cattatgcaa	aaaaatatct	acatatatat	gtgcaaaatg	gatccaatca	atttataaat	4200
acttataatt	ttcaggacgt	taacaatatt	aatttggtac	attgtacaaa	aaagaaacgt	4260
cccaaagggt	gatctacgcc	tgatgaaaag	tataagggtg	gtgaaataaa	aggggaatgat	4320
ataataaagg	agagtgatat	aataaaatgc	aatgatataa	taaaagagag	tgatgtagta	4380
aataagaacg	aaattgttga	aaatatgaac	ataataatag	aaaaggacga	aataaaaaact	4440
gataaatata	cagaacctat	taaatatgac	aatacaatg	atgctaaatc	cattctcaaca	4500
tctacatctg	ttttatcttc	tgaatcttct	aatgaattat	ctgattgttg	tatgaataaa	4560
ttactaaag	aaaatatgga	gatgaataat	gtaattataa	caaaaaataa	taataatgat	4620
aataataatg	aaaataatga	aaataatgaa	aataatgata	ataatgaaaa	taatgaaaat	4680
aatgataata	ataataataa	taataataat	aacaatgttg	aagtatataa	accaaattat	4740
aaaataaatg	gattgcagaa	cataattaat	tcttgccctta	atttcactctg	ttctaagagg	4800
aaaaacataa	aaaacaaaat	aaaaaacaaa	ataataaaaac	ataagaaaaa	caaaataata	4860
aatcataaga	aaaaaaaaaa	aaattgttaat	acacgtcaca	gaggaaatc	ccaaatcaac	4920
aacaaattgg	ttttaataaa	tattacaccc	tatattttaa	gatatacctaa	taataataaa	4980
agttcgaaaa	agctctcctg	cacaaaagaa	ataaaaaaaa	aaacgtttcc	tagaatatgt	5040
gaaagctatg	atataaagaa	aaatattgat	atacacaatg	taaacaaaaa	gaattataag	5100
aaaatagatg	atacattaaa	tgtacataag	gaagaaatag	atacttctaa	acaacataca	5160
gatgaaaaaa	tatgtaagaa	aatacaaaaa	tattttatatt	tagatgttaa	aaggaaaaata	5220
tatataatcct	tatatatgta	caacaaaaaa	aagggtaaaa	acacaaaata	taagaatata	5280
caaaaaaaaa	aaaaaaaaaga	agaagaaaaa	aaacaaatat	catataatat	atcttccaaa	5340
cataatagta	tattaaataa	tcgtatgaaa	tataacaata	ttatagatat	gtataaaaagg	5400
aacaatttta	tttataaaga	tgataattat	aaaaggatat	atacatatga	tgaaatctta	5460
gaaaatgata	taaatatatc	ttattttaata	aaacaaataa	atattttgaa	tgttacaata	5520
atatgtggta	tgagaaatgt	gggcaaaaac	tttttgagca	aaaaaattga	aaataatata	5580
attattgata	tagatgaata	tatatataaa	gacgaaatta	aatttgataa	atttgtctata	5640
tcggatttta	gatattatga	atatgttaaca	tttatttctt	ctctatatct	agctttttat	5700
atattaacat	ttgatagaaa	tttgagtga	cctaaggatc	aaacgggagc	aacaataaaa	5760
catgtagata	taagggatga	aaaaataaat	tcgaaaaaatc	aaaacaaaac	aacagaatat	5820
gataatgata	ttaatgataa	caacaactat	aataatagcg	ataaccataa	tttgttacat	5880
aataataaag	ataaccaaca	tacatccaca	aaaaagaaaa	ttcagaaaaa	agtatccttt	5940
tcggatgtat	gcgaaatata	gtttgatgggt	cccaactttg	aaaaataaaaa	ttatgatgac	6000
aatatttttt	atacttatat	aaataaagggt	ataacatttt	ataacaaaaa	aataaatgat	6060
ttatttttga	aattaagaaa	aaaatgtata	caagaaaagc	aaaatggaga	acaccaaatg	6120
accaacgtta	caattgtatt	aggaggtgggt	attatcgaat	ttgataaatc	gaaagaagtc	6180
ttaaaaaaac	taaaaaatac	tatttttaatt	aaaagagata	tagatgaaat	atatgatata	6240
tgtataaatg	ataatataaa	acctaataa	aatggaaata	tcaaagatat	tatacataga	6300
agaactatat	tatatgataa	gttatccaat	gcttttcatt	ttattatacc	ttcagaaaaa	6360
atgataaata	aatatattag	acattctgaa	tataataaat	atataaatag	aatgaatta	6420
atagtacata	gctttttacg	cttttttaatt	tatccttttt	ttaaaaaacc	attaataggt	6480
gatataataa	caaattataa	aattgataaa	aatgaaaaaa	atgatgaaaa	gaatgatgaa	6540
aagaatgatg	aaaagaataa	tgaaaagaat	gatgaaaaaa	atggtgataa	taatgatgat	6600
aataatgata	ataataatga	ggatgaaaat	aataagaaga	aaaaaaaaaa	aaaaaagaac	6660
gattgtaatc	ataatcatat	taataattat	tatcgtgtct	tatatatcaa	tttaataaac	6720
ttgagacact	ttccatatat	gaatttatta	aagggaagatt	atgatattat	acataattaaa	6780
atatataaat	atgaacaaat	aaaattatta	gagctagcta	tttttcttat	aagatcgtgt	6840
acatgcaaag	aatataaaa	tattgtaaaa	ttatattctc	aatattttct	tacgtatcaa	6900
gaatatatta	taaaaaaa	gaaacataaa	aagaaaagcc	tgaagaataa	aaagaaaagt	6960
aataaaaaat	atgaatttga	taattatata	tgcgaaaata	tactacatat	attttataaa	7020
tataaaaatta	atatatttga	attagataat	catttttttaa	aagtagctaa	aaaaatatta	7080
tcataataaa	aggaaaatat	attttttcat	atctccaaaa	aagaaaaaat	aataaaataa	7140
ttaaaaatc	aaagtgattt	atataatg	aatatatggc	aagctgatat	tattaaatta	7200
tcaggttctc	atcaaatctc	tttaacagaa	tgtaacctct	tagaaaaat	tttatatgat	7260
ttttatgttg	atacaataaa	ccaacccgca	aatacattat	tatttgaaaa	acgcctccac	7320
aataatgata	aaaatgaaca	aactcatatt	ttatattata	atgctactga	caaagtgtta	7380
ttttcctttt	tatataataa	cattacacat	ttatcttaca	acaaacgttt	cttacctata	7440
ataaaaaaaa	ataaaatgta	tggatatattg	agtaatatata	aagaggacca	tacaaatcaa	7500
aatattcaaa	gtgaatctta	ttatacacaa	tcttcttatt	acaacagagt	aaagcctatt	7560
ttgttctata	cgatcataca	aaatgttaaa	gaaaaaaaatg	accatcaaca	aacaaattaa	7620

<210> 266  
<211> 4311  
<212> DNA  
<213> Plasmodium falciparum

<400> 266

atgcagcaag	atggtaatat	acaagtaaaa	atattaaaaag	atgtaaatcc	ttattattat	60
aaaaaagaaa	atccatacga	caatttagaa	tataataaat	atgttatgaa	tgtgaatgat	120
gttgagggaa	cgaatattat	tgatgataaa	aaaaaggatt	taggtaaatc	aaaatatgat	180
atttttacga	cagattcttt	gtcaactact	acagatgaag	tatcttatag	ttatcaaatac	240
gaaaaataaaa	atgaagaaaa	agaatatttg	agatattatg	ataaacaggg	agggtataata	300
cgacaagata	ataataataa	tgaaaataat	aataataata	tttghtaataa	tgaccataat	360
aataataaca	tttghtaataa	tgaaaatatg	ttaacaacaa	aaaaaaatga	taatacaata	420
ataaatagta	atattaaata	tttaacaat	aataatatat	ttaataccaa	catggtagca	480
caaaaaaatc	acacacaaat	atttaacccc	tatgataaaa	gtatgaggaa	tattcaattg	540
tataataaag	cagtaagctt	tttaaaaaat	gatggggaca	taaattcaaa	aaaaataacc	600
catgataaatt	taatgttctt	aaaaaatata	cgaagtaaaa	gtaataataa	tcttattgta	660
aataggaaaa	taacaaatca	tgtgacaaat	aatgtgataa	gtgggtatgac	aaataaagt	720
atagggtgta	tggaagtggt	tatgacaaat	aatgtgacaa	gtagtataac	aaataaatg	780
acaagtagta	tgacaaataa	tatggcaagt	ggtatgacaa	gtagtatgac	aaataaatg	840
gcaagtggta	tgacaagtag	tataacaaat	aatatgacaa	gtagtatgac	aaataaatg	900
gcaagtggta	tgacaagtag	tataacaaat	aatatgacaa	gtagtatgac	aaataaatg	960
gcaagtagta	tgacaagtag	tatgacaaat	aatatgacaa	gtagtatgac	aaataaatg	1020
acaagtagca	tgacaaataa	tatgcttaat	aatatgaata	gggttgtaac	gaataatatt	1080
attactaata	tgaacagatc	agtttcggga	agtaaaagta	ttaacatgag	caatctgtta	1140
atcataaata	agatggatta	tggtaatgac	atttaccata	acaacaacaa	caataataat	1200
aatagtagta	gtggtagcaa	tattgtcagt	ggtaaatatt	ttgtgaattc	tcaaaatagt	1260
agcaaaaaata	atttctttac	aaaagtagga	gaaagcacia	tacgatcacc	aacaaacatt	1320
ttagatatatt	ataaacaggg	aaatatgtat	atgcacatcc	caaaaaatgc	agatttaatt	1380
aacaatgttt	cttcataatg	tatagcacat	gaaaattata	ttaaaaggga	caacacaaat	1440
gtgactcatg	tgtaaaataa	taaccacctt	gtaaatataa	ataatgtggt	aaacaacaac	1500
aatttgtaata	ataacaacaa	tttgaataat	aacaacaatt	tgaatagtaa	caacaatttg	1560
aatagtaaca	acaatttgaa	taacaacaat	aattttaatta	ataacaataa	tttaattaac	1620
aataattatg	taagaaataa	ccaagctgta	aataacgctc	atacattaaa	tgctcatttt	1680
aacaaaagcg	ataatgtgga	taacatgaga	aaccatattc	caaacaatga	caataaaatg	1740
attgtaaata	tgtaaaattt	aaaaaatatg	aaaagttatta	atgatttgct	agttttaata	1800
aataaaaaata	aacctattca	tcattgtaata	aatgggacag	agggtcaaca	aaaaagatcc	1860
ttgagtaatg	ttcaaaaatt	aaaaacgttg	aacacttttc	caaattgcaa	gggaagggtt	1920
agtttgatca	ataaaatggc	tagcatgccg	aatatgagca	cgacgagtag	tatgaacatg	1980
tcagggttaa	acacaagctc	gtctgaagga	ttaaccaaca	taattaatat	gaataacata	2040
aacagtgtga	ataatataaa	cagtgtgaat	aataataaca	gtgtgaataa	tataaacagt	2100
gtgaataatt	taaacagtgt	gaataatata	aacagtgtga	ataatataaa	cagtgtgaat	2160
aataataaca	gtgtgaataa	cataaacagt	gtgaataata	taaacagtgt	gaataatata	2220
aacagtgtga	ataatttaaa	cagtgtgaat	aataataaca	gtgtgaataa	tataaacaat	2280
ataaattata	taaacatatt	aaattatgta	aatatgaaca	agggtttgaa	ccctataaat	2340
aatgtaagca	atataagcag	cctaaaattg	ttaaacaata	ataatgatat	aaaaaagaaa	2400
tttaatacat	atggaaaaag	tgaggcgtcc	gaaaatttaa	gtaagaatgt	caaatacata	2460
aaatatattc	aagaaaaat	taaatatttg	aataactctg	atgataataa	aagggaagt	2520
tctctcacaa	gtataaatga	tgtgggatgt	ataaaaaaaa	aaaaaaatat	gaattgattt	2580
tttttaggaa	agcatgataa	tatgttacgt	acagatgaaa	taccaagat	aaatttagga	2640
aaaaatatat	tgaataataa	taaaataata	aattataatg	ataatgataa	aagtaataat	2700
ataaataatg	ttataaataa	gaacatttct	acagatttgg	tgaatgatag	agagggtgat	2760
atgaataaaa	tgaatattca	taatagagag	aaggatgaaa	ataattatat	aaatattggg	2820
gataataaaa	taaagaaaaa	tcaaattgat	gttgttaata	ataaggtaat	gaaatttgat	2880
aatatggagg	atgaagaagc	tatgaataaa	ttatcattaa	tatctttata	tccaaacaat	2940
aatcacatta	ttataatgtg	gaataatgtg	aataatgtga	ataatgtgaa	taatgtaaat	3000
aatgtgaata	atgtaaataa	tgtgaataat	gtaaataatg	tgaataatgt	gaatttatat	3060
aataatatga	ataatgtgaa	taattgtgaat	aatatgaata	atgtgaataa	tatgaataat	3120
gtgaataaatg	tgaatagtgt	gaataatata	aaagggaataa	ataacatgaa	caataataat	3180
aataatataa	acatgaatcg	aagttataaa	atgaacatga	aaaaagtgtc	caaaaaagat	3240
aatggtcaaa	atgtggtatc	ggaaaaacga	tttagcggaag	aaaaatataa	ttttcttaaa	3300
aatttaatac	gaaataataa	gaatatggtg	aaatttaaat	atctgaataa	attttttagga	3360
aaaagaagt	gaccatcaat	aaaaaacaat	atgaacgata	tgatgggttaa	gatgaataat	3420
aacatgaagg	atattatgca	tataaaggat	gcaactaata	taaacaaaat	taataataag	3480
ttggtaaatt	taaatacga	taattgtatt	tcttataata	gttghtaacia	aatgaattat	3540
atacataaat	gtaaaaagaa	aagagtttta	tgttttagata	cgaaacatgg	gaaaaatgaa	3600
ataaaaacaaa	atgagaaatt	aatttatata	aattacgaaa	taaaaatgtt	tttgtttaat	3660
acgattaaag	caataggtat	agtttttaag	aaatggaaat	ttaaaaattt	cggattatat	3720
ttttgggatc	atattaaatg	tatagaaaaa	gaaagagatt	taaattttta	tattaaaaata	3780
tttaattttt	tgtttgaaat	cataacaggg	aaaaatatat	attaccaaat	aatgacatt	3840



cataacattg	ttgcattatt	taaagaattt	aaaatatatg	attgtaagca	tgtttttaa	3900
aaaagtatta	aagtttttaa	taaatatgca	aaaaaaatt	caaaggaatt	ctcacttttt	3960
gaaaataatc	aacatgtagt	attagacatc	aataaacata	tgttatttaa	tgatgatgaa	4020
aaaaaattaa	caacttgtaa	tataaaacaa	aatgaacaag	aacaaattaa	aaccaaagtt	4080
ctttatgatc	atgataatat	aaatgtagac	acgaaacaaa	attatcaaaa	aataataaca	4140
aataaaaaata	atcatccaaa	ggataatttt	tattcatatc	tatatgattc	cttacaagga	4200
aaaaatcata	tctttcaaca	accaggcgta	caaaatatgc	atatatataa	tatgtttgca	4260
caatttaatg	aattaaattt	taatgatatg	tttaactttt	caataaccta	a	4311

&lt;210&gt; 267

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 267

atggcctttt	tttgcctcaa	ttgtcataac	attgttttag	tacatataga	aaaggggtgt	60
tattttttatt	gtaaatcatg	taattataag	tataaaataa	aaaataaaat	atataataaa	120
ttcgattgtc	aacaatttaa	caagactatt	cctttggatg	ctgttgatat	aaataataaa	180
aatatgtcta	agactcaagc	tgtatgtcca	aaatgtacaa	acgatgaagc	ttatttttat	240
actttacaaa	taagatcagc	agatgaacct	agtaccattt	tttatatttg	tgtaaaatgt	300
aactatcact	ggaaagaata	a				321

&lt;210&gt; 268

&lt;211&gt; 1416

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 268

atggatgtac	atgtgaacca	actgaaaaac	atatcgccca	tcgacgggag	atacaaaaga	60
tcgtgccagg	aagtaagcga	atatttttca	gagtagcgtt	taataaaata	tcgaataata	120
gttgaaataa	aatggttatt	attttttaaat	gacaaagaat	atctctttcc	aaaagttagt	180
gagaagagtt	tgagtaatat	cacatcgatt	atggaattaa	taaatgataa	tgatatatta	240
cgtgtaaaaa	agatagaaga	agaaacgaat	catgatgtta	aggcgggtga	atattttata	300
agagagaaat	tagaaagttt	aaaaaatgaa	gaaataacaa	aagtaatacc	atattgtacat	360
tattttatgta	ccagtgaaga	tattaataat	atagcatatg	gtttatgctt	atataattgt	420
atacataata	taataatacc	aaatatacaa	aacattatag	acaaattaaa	agaattctct	480
tttaattatt	ctgatgtatc	tttattatca	aaaacacatg	gacaacctgc	atcaccaact	540
acctttggta	aagaaatgtc	caactattat	tatcgtttat	ataagcatat	aaataaatta	600
aaaaatattg	agatatatgt	aaaatttaat	ggagctgtag	gaaattttta	tcgcgcataaa	660
gtctgtgatc	ctaattattga	ttggatcgat	aatattaaat	attttataga	aacatatttt	720
aatttacatt	tttcattata	ttgtactcaa	atacaagatc	atgattatat	atgtgagatt	780
tcagatacat	tggctcgttt	aaattataca	ttgatcgatt	tatctgttga	tatgtggtta	840
tatatctcat	caaagtgttt	aaaacttaaa	gttatacaaa	aagaaattgg	aagtagtacc	900
atgccacata	aagtaaatcc	tatagatttt	gaaaatgctg	aaggtaattt	acatttagct	960
aattctttat	tcaagttatt	tagttccaaa	ttaccaataa	gtagattgca	aagagatcta	1020
tctgattcaa	ctgttcttag	aaatttaggc	tcattctttg	cgtattccct	aatatcatat	1080
aatcattatt	taagaggatt	aaataaaatt	gatgtgatgc	aaaatgttat	gaatgaacaa	1140
ctcaatcaaa	attggtgcac	attagcagaa	cccatacaaa	ttattatgaa	aaaatataat	1200
attgctgatt	cgtatgaaca	acttaaaaac	ttcactagag	ggaaatccat	agacaaacaa	1260
tgcatgtatc	aatttattca	acaaaactgt	agtcactctac	caaaaaatgc	aatcgatgaa	1320
ttgatgaatt	taacaccgca	caattatctt	ggctacgcaa	gctatttgtc	aaaaaatgtg	1380
gagcacttct	cacaggaata	tataaaaaaa	aattaa			1416

&lt;210&gt; 269

&lt;211&gt; 819

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 269

atgaaggtaa	ttaaaacatt	gtctattata	aattttcttta	tttttgttac	ctttaatatt	60
aaaaatgaaa	gtaaatatag	caacacattc	ataaacaatg	cttataatat	gagtataagg	120
agaagtatgg	cagaaagtaa	gccttctact	ggtgctggtg	gtagtgtctg	tggtagtgtc	180
ggtggttagt	ctggtggttag	tgctggtggt	agtgtgtgtg	gtagtgtctg	ttctggtgat	240
ggtaatggtg	cagatgctga	gggaagttca	agtactcccg	ctactaccac	aactaccaaa	300
actaccacaa	ctaccacaac	tactaatgat	gcagaagcat	ctaccagtac	ctcttcagaa	360
aatccaaatc	ataaaaaatc	cgaacaaat	ccaaaaggta	aaggagaagt	tcaagaacca	420
aatcaagcaa	ataaagaac	tcaaaataac	tcaaatgttc	aacaagactc	tcaaactaaa	480

tcaaattgttc caccactca agatgcagac actaaaagtc ctactgcaca acctgaacaa 540  
 gctgaaaatt ctgctccaac agccgaacaa actgaatccc ccgaattaca atctgcacca 600  
 gagaataaag gtacaggaca acatggacat atgcatgggt ctagaaataa tcatccacaa 660  
 aatacttctg atagtcaaaa agaattgtacc gatggtaaca aagaaaactg tggagcagca 720  
 acatccctct taaataactc tagtaattatt gcttcaataa ataaatttgt tgttttaatt 780  
 tcagcaacac ttgtttttatc ttttgccata ttcataataa 819

&lt;210&gt; 270

&lt;211&gt; 819

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 270

atgaatatat tatgtattct atcatatat tatttttttcg ttatttttta tagtttgaat 60  
 ttaaataata aaaatgaaaa ttttttggtt gtcagaagat taatgaatga cgaaaaagga 120  
 gaagggtggt ttacaagtaa aaataaagag aatggaaata ataatagaaa taatgaaaa 180  
 gaactaaaag aagaagggtt tttacctact aagatgaatg aaaaaaattc caattcatca 240  
 gataaacagc caaatgatat ttcacatgat gaatcaaaga gcaattctaa taattcacaa 300  
 aatatccaaa aagaacctga agaaaaagag aacagtaacc ctaatttaga tagtagtgaa 360  
 aattcgagtg aaagcgcaac acgttctgtt gatatatcag aacataattc taataatcca 420  
 gagacgaaag aagagaatgg agaagaacct ttagatcttg aaattaatga gaatgcagaa 480  
 atagggtcagg aacctccaaa tagattacat tttgacaatg tagatgatga ggtgccacat 540  
 tatagcgccc taagatataa taaagtagaa aaaaatgtaa ccgatgaaat gttattatat 600  
 aatatgatga gtgatcaaaa tagaaaatca tgtgccataa ataattggtg atgttctgat 660  
 gatcaaatat gtataaatat aaataatata ggagttaaat gtatatgtaa ggatggatat 720  
 ttacttggtg cgaaatgtat aatattgaat tcttattctt gccatccatt tttttctatt 780  
 cttattttata ttacattggt tttgttatta ttcgtttaa 819

&lt;210&gt; 271

&lt;211&gt; 819

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 271

atgtggatag ttaaattttt aatagtagtt cattttttta taatttgtac cataaacttt 60  
 gataaattgt atatacagtt ttcttataat atagtaccag aaaatggaag aatgttaaat 120  
 atgagaattc taggggaaga aaaaccaaatt gtggacggag taagtactag taatactcct 180  
 ggaggaaatg aatcttcaag tgcttcccc aatttatctg acgcagcaga aaaaaaggat 240  
 gaaaaagaag cttctgaaca aggagaagaa agtcataaaa aagaaaattc ccaagaaagc 300  
 gcgaatggtg aggatgatgt taaagaagaa aaaaaaacta atgaaaaaaa agatgatgga 360  
 aaaaacagaca aggttcaaga aaagggttcta gaaaagtctc caaaagaatc ccaaatggtt 420  
 gatgataaaa aaaaaactga agctatccct aaaaaggtag ttcaaccaag ttcattcaaat 480  
 tcagggtggcc atgttggaga ggagggaagac cacaacgaag gagaaggaga acatgaagag 540  
 gaggaagaac atgaagaaga tgacgatgac gaagatgatg atacttataa taaggacgat 600  
 ttggaagatg aagatttatg taaacataat aatgggggtt gtggagatga taaattatgt 660  
 gaatatgttg ggaatagaag agtaaaatgt aaatgtaaaag aaggatataa attagaaggt 720  
 attgaatgtg ttgaattatt atccttagca tcttcttctt taaatttaatt ttttaattca 780  
 tttataacaa tatttgttgt tatattgtta ataaattaa 819

&lt;210&gt; 272

&lt;211&gt; 5139

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 272

atggatagtg ataaatataa aaagttctat gtctacaatc atgggtttac aaaacagcca 60  
 ttttacgaaa gaaacttgaa tgataaaggt attcacttga aggaattaaa aagactggaa 120  
 agagtggatg aacctagatt atataataat gttgataaga ttccaaataa gaaagaaatt 180  
 atttataata atataaagag caataatata caagtaagag taaatcaaaa taataatgaa 240  
 gagaaaaaga aagaggaagc aaattacacc tgtgtaataa ataaatacgt tacattgaaa 300  
 aacaaggtgc atgttaacaa atatgtaaat aattcaaaca taaataaaat aaaaatagtc 360  
 cctataatta aatgtagtaa ttataaaata aaaaacaatc ctatatcaca tttgaaatcg 420  
 aactatgaaa ataaatttgt caaattatcc aatttttcaa acataaaaaa tggttgttcc 480  
 cataaggata atgtaataaa tgaaacaatg gatcaacata agtccgaaca gttaaataat 540  
 gataatataa aaaaattggt atatgattat tgtatatattc gtgaagatac tataaaaaacg 600  
 aaaacgaata tatcatataa caagatgaat agtttttaag acaatgaaga aaatataaat 660  
 tacatggata ataataatat taagagtaat agtagtagtt attgtagtta ttcaaataaa 720

atcaacccaaa	acaatgtaaa	ccatacacat	ttgaaaacag	aattttcttaa	cgaabaaat	780
agtcatacac	aaaatgaaca	atccatacca	ttacttgatg	ggttacaaaa	taatcataat	840
tcagctacca	aatttcataa	taatatattat	gataacaata	attcacttgt	taattataaa	900
tctgataaaag	gcatagacct	tcataataag	atgatgaaga	tagaaacaga	taaaaatgga	960
attattacac	tggagaaaaa	gaaacatgat	gaaaaatatt	ataataatat	attttttaaa	1020
ccattaaatg	ataattcaaa	taatgttgtt	attacaactt	gtgataataa	agaaagttaa	1080
cgaaacagca	caagtgatat	gataaaccac	atttttgaaa	agatgatgaa	tgagaaaaaa	1140
aatatattaa	aaatgaaaaa	ttttaatgat	gttattaaaa	aaaaaattac	aatggcaaaa	1200
gaaaaaatac	ttaattcaaa	tagtacaatt	aatatgaaaa	agggtttctt	ttataattct	1260
aaggatgagg	acttatttaa	tgaaaaagaa	aatagttata	aatatgggtg	aaagagggaa	1320
aaccagggaag	atataaatgt	aataaaaaat	aatatgaaaa	ggaataatat	aaatatgtat	1380
aataatgata	atataaatat	aattaaaaac	gatagtgtaa	gtaaaaatat	tcataataat	1440
aataaaaaag	aaagggatga	tgatttcctt	tttaataata	gtgctgggct	attattagat	1500
tttgatttgt	gtaaaaggaa	agttttggaa	atacttaaaa	atgtgcaatc	atcaaaaaaa	1560
aaaaataaga	ttttaacaaa	tcataatcat	agtagtgata	atcaaaattg	tcatagtagt	1620
gataatcaaa	attgtcatag	tagtgataat	caaaattgtc	acagtagtga	taatcaaaa	1680
tgatcatagta	gtgataatca	aaattgtgat	agtaatgcat	gtaataaaaa	ggatgaagaa	1740
aaaaagagaa	aaaaaaaaaa	aattaagaaa	aaaaataaaa	tgaaaaataa	aagcaataat	1800
aaaagttaaa	ataaaagaga	aactaaaaag	aaaaaaatta	gcaataataa	taataatgat	1860
aatatgaata	atcagtgtga	taacatgggt	gaccaagaa	taaataatga	aaatatggat	1920
aaacaaaatg	ttaatattca	aaatgaaggt	aatgggttta	ataataataa	aaataataat	1980
gatcttttaa	atgtttatat	atcaccta	atgattaatc	attctttatc	ttcaacttgt	2040
gaaaaaaaaa	ataaagaaga	taacaaaatg	aatgacaata	aatttcttaa	tagcagtagt	2100
aaaatgaaaa	ttccagagat	aagtacgaac	aactcaaatg	aaaagattgt	taatgtgtca	2160
aatgatgaaa	tgtagtata	tcataattta	accgtattaa	atgtaaagga	acaaggaggt	2220
gtaacagaag	aatcgagctg	tataaaacgc	acataatttg	tggtcaatt	ttatgattca	2280
tataatatga	gaaatgaaaa	aataacagat	gataatatgc	aagtagaaga	tatatataat	2340
gtaaaggaaa	atataaaaag	aactctaaaa	ggatgatggtc	atgatgatgt	caaaacgaat	2400
atgctgagtg	aagataatag	ttatgcaagt	ggtttatggg	gtaacgaaat	aaactttatt	2460
agtaataatg	aaaattgttt	aaatagctat	gatataatcat	gtgatgagaa	atatatccca	2520
aatgaagagg	aacaggatga	ggaactttgt	tcaaatataa	ttcttgtaaa	agatatagaa	2580
gaaaagaaaa	tggtgtgtaa	attatttttt	gaagaaattt	gtgtattcag	aataaatgaa	2640
aagaatgaac	atggacatga	aaacctaaga	aaaaataatc	acaatgacga	tactcataag	2700
atgtatagta	gttatgaaaa	tatacaaaat	attaataaac	agagtacaaa	ccctttttgt	2760
aaaaaagatg	aaatggagaa	gagccaaggg	actaatttat	tttatgataa	ttacattaac	2820
agtgtggaca	taacaaaatt	agaattaaat	aagaatttgt	accaacatat	taattatgaa	2880
gttcaaaatt	taattaaaaa	agaaaaattc	tatgcagctg	aaatgaatgt	agggttagtg	2940
tttcgtaagt	atattcctat	tctcataaat	ttgtcatgta	attatttgct	tataaaaaag	3000
aatgaaaaga	atgtgattac	ttgtatatca	tataactaaca	ttatagacgt	aaaaattgta	3060
aagaagagta	aaaaaaaata	ggaacgggtt	ttatttaaaa	tagtttatgt	atttaaaaaag	3120
aaagaacaga	aaactgaaaa	aaatgttaact	cttttattta	gagcaaattt	aatggaaatt	3180
tttgaaaaga	taaaaggacg	agtagattat	tgtataatac	caaatgaaga	tgataaaaa	3240
attcaattac	aagacaaaaa	aaaaaaaaaa	ggaagaaaaa	aaaaagagct	acaggaagaa	3300
aaaatgaaaa	aaaaaaaaaa	aacacaagaa	tatgtagata	tcgaaacggt	atatgaatat	3360
gtaatagaaa	aataataaaag	agtacatgta	ttatatattag	gacgtttatt	acagatttgt	3420
gaaaaacttt	ttaaaaaata	tatatataaa	tattcatttc	ataaattaaag	aatattttat	3480
gaatataaaa	tagaaatgga	aaaattaaaa	aaaaattata	ttcactgtat	atatgatata	3540
agtataaat	tagaattcct	tataaaaaaa	aaaattgcaac	attattttta	tcataataa	3600
ataaatagtt	atgaatcaag	ttttattaat	tatcaaatca	aaacaaatga	tatgttatat	3660
aatttacttt	taaaagaaaa	atctgcttac	caaaaccatt	tgggtaaaaa	ttatatttta	3720
atattataca	aagtattact	tagtatgtat	aaaaaaaaaa	tggctatcta	ttttagatct	3780
tttgatataca	ataatataaa	agtaagtaaa	aaaaaaaatg	cgtttgcata	tacattaact	3840
cgtgtaaaata	gtatatattag	tttatatgaa	agacggatta	aatcatttat	cttttccaaa	3900
ttaaaattta	attatgataa	tgtatcatat	ttttgtttta	ctatgtataa	aatataattta	3960
agaagaattt	tatttggaata	tctacgcata	cgagataatc	gtatcaatat	taaaaattgtg	4020
attgaaaaaa	atgtttacag	gcttggttaa	ttaatttcaa	aaataagtga	taatacataa	4080
tataatgcat	ttttaaaatt	acaaaaatat	gtatatgaac	aaaatgaaaa	gaaaaataaa	4140
atgatatgtg	ataatttaat	atatgcaaat	aatgaattgt	gtaataatct	agacaaaata	4200
gctattgaaa	agggaattaa	tcaaatagat	tgtttaatca	aatttaaaag	aaaagaatgt	4260
ttaatgaaat	atctctatac	attaaaagggt	ccacaaatta	atactgaacg	tttctattat	4320
tgtataagat	attgtagtat	cttttcattt	gtattaaata	aaattataca	gaagaaagtg	4380
caacatatatt	ttttccaatt	tgtacttaaa	acattacaac	gaaataataa	aaatagatta	4440
acacatgcaa	tcaaattatt	acaagtatta	gtacagaaaa	aagaaaaaaa	aagtgtataa	4500
gatgtattac	aatttatatga	caaatatcca	tatatatttc	agtacaaaga	tttaacaaag	4560
atagagggtt	ttgttatttg	tgtacaaaat	tttgtaactc	tctataacag	aaagctgtta	4620
ttaaactttt	tattaaaatt	gcattattta	aaatatcaag	agcagtttat	gaaaaatcat	4680
aatgggtattg	gaagtatata	caaatttggt	catgtcctgg	acaagaagct	catgaatact	4740
atacgtgagt	cattccgggt	aatattacaa	aatgataaat	ttctaagaga	aaaaatgaac	4800
atgaagatgg	aacaaatgga	tatgaagatg	gagaaaattg	atgtgaatat	ggatcaaatg	4860
gatgtaaaaa	tgaacaaat	ggatgtcaag	atggaacaaa	tggtatgtcaa	gatgaaaaga	4920

atgaacaaga	agaaatcgaa	acaaatacat	gttaattaca	ataataaagc	atattcttca	4585
tcttctcctt	cacctatggt	acgtttataat	aaatataagg	acatgtcatc	gaattcggca	5040
agtctcataa	agaagtatcc	tttctctata	tacaactcgg	aaatatctcc	ggactgtaca	5100
accatggcgg	gtaaatttta	taatcaaaaa	aataagtaa			5139

&lt;210&gt; 273

&lt;211&gt; 483

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 273

atgttataat	ttttaagtag	aaaatgcaaa	cagtttaatt	cattaaacca	tataataaaa	60
cataaaatat	atttcccttc	aaaaagtaat	aaaagttatt	tttcttcttc	cgtaaaagat	120
gtagagaaaa	aaaacaaaga	acctatcata	caattaacga	atgatgctat	aaataaaatg	180
aaagaaataa	atttaaagta	taaaaattcc	aaagctttta	aagtttgtgt	agaagcaggt	240
gggtgctcag	gatttcagta	ttctttttca	ttaattgata	aaaataaaat	aaaagataaa	300
gaacaaatag	tttatgataa	agattgtatt	gtagtaatcg	acaaacaagt	tattgatatt	360
ttaaagaata	gcaaaatata	ttacattaat	aatcttatat	ctaaaaagtt	tacaattgaa	420
aatatacaaa	atatttcctc	caagtgttca	tgtggaaatt	cctttgatat	tgactttgta	480
taa						483

&lt;210&gt; 274

&lt;211&gt; 1809

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 274

atgttttccc	tgtgtacagt	acattcaaat	atgttaatta	attgctttgg	agttctacat	60
tgtaatatat	gccgcacagt	attaagaaat	tgctttttgt	ctgggacatc	tgattttaca	120
aaatgtattt	catgtggaga	gaagtattac	aaaattagtc	cttgtagaca	aaaccatgaa	180
gtaaccgatg	agaagatgaa	aaatttgata	acaaaaataa	tagaaattgc	catagacagg	240
catacgttgg	gtttacacga	ttttagtagt	gttagcgtat	aatataaaga	gaaaaataaa	300
atgttatgta	tgttttctaa	ctataaagat	aactatgaaa	atgctaacaa	ccacagacaa	360
gcaaaagtag	aaatcgtcga	agaacatata	cataaaattg	tagaatcata	tataaatgaa	420
gaaaaataa	tggaacatat	gaaagattta	ttaaagaatc	cagctttatg	tttaaaaaat	480
cctaatacaat	gggttaaaga	tagagcaggt	tttaaagatg	atgataaacc	ttctgttggt	540
ataataacctg	agaggaaaat	attcaaacct	tatgatatta	agactttaaa	aagttcttta	600
tatgcctcta	gcacaaattg	tgacaggcaa	ttttgtgatc	gtttttctga	ttcaaattgaa	660
tgtgagcata	gaattagggt	tctcaatcaa	ggaaaatgtg	ggaattgttg	ggtttttgc	720
tcgagtgttg	ttatagcagc	ttacagatgc	cgaaaagggt	taggatttgc	tgaaccttca	780
ataaaatatg	taacattatg	taaaaataaa	cacttaattg	atatcgacaa	taatcccttt	840
ggtcattata	atgataacat	atgtaaagag	ggtgggtcatc	tttcgtacta	tttagaaacc	900
ttggaaaaga	ctagaatgtt	acctacatct	catgatgtac	cttataatga	gcctataaca	960
ggatcggaat	gtcctgataa	taaggagaca	tggaagtaata	tatggaaagg	tgtaaatttg	1020
atggatagga	tatatgcagg	atatatatat	catgggtatt	ttaaggatc	ctttaaggat	1080
tatgtagtta	gtaatagaac	caatgattta	ataaatataa	taaaagatta	tattattcaa	1140
caaggatctg	tatttgtttc	tatggaaagta	acagataaat	taacatttga	tcatgatggg	1200
acaaaagtta	tgtatgagttg	tgaagataat	gatagtcagg	atcatgcctt	agtattaata	1260
ggatatgggtg	attatataaa	aacgaatgga	aaaaaaagtt	cttattgggt	attaagaaat	1320
agttggggat	cacattgggg	tgataagggg	aatttttaaat	tagatatgta	tggtcccaat	1380
aattgtaatg	gtaaagtatt	atataatgcc	tttccctttac	ttttaaatat	ggcacataat	1440
ccaatagatg	tcccattacc	taatgattta	gcactacag	atattagagt	tagatataga	1500
caatcggatt	ttaatcaaaa	tagaaaatga	aataattatc	cacaatatga	taaaaacagt	1560
aatgataatg	atcgaaaatta	tattaatcca	tataataaga	atgataataa	ttataatcct	1620
tataataaag	ctcattataa	tgataaggaa	aatgatgctt	attatgaaaa	aaatgatgat	1680
tataataatg	cacatattag	gagaaatata	attcgtttca	agaaaagaat	tatcaagtat	1740
tcttttatatg	caagaattgg	aaacactgta	tataagagga	ctatatttag	caaaagtacg	1800
tgtaactaa						1809

&lt;210&gt; 275

&lt;211&gt; 2841

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 275

atggatatc	gcttatttat	tatttttagta	ttgtatgtta	tctgttgtag	aaatgtaata	60
gtaggacaag	aaaagcctcc	tcctgatagt	actgttggtg	caaattccagg	agacgaacgt	120

gaatcttctg	gtagagtga	taatcctgct	tcagggtgagc	aagggtactac	aaattcacc	180
acagaacaac	cagatcaaac	aagagataga	agttcttccg	tacctcaagg	atctccaaga	240
gaacctgtat	ctcctgaaaa	tccaaatccc	gttacacaaa	ttccaggaaa	tgagggtgct	300
cttgtaactc	caattccact	tccaaaactt	acattagaag	attctgaatc	ttcaaaatct	360
gtaattgaca	ttgaagttaa	atctgctctt	ttaaaaaact	atgatggagt	taagattact	420
gggtccgtgta	gatcctattt	ccgtgtcatg	ttgggttcctc	atattactgt	ttatgtatat	480
gcaacatatg	atcgaataca	actagaaccc	aaatttgggtc	catccgattt	aatagatata	540
aatgatttaa	caaataaatg	taataaagat	tctaataaat	atttcaaatt	agttttgtat	600
ataaaaaata	atatattaat	tctcaaattg	aaagtacaag	ataaggattc	taaaccaaca	660
aacatcgatg	tggtatgtaa	gaaatataaa	atcccaaaac	tggaacagacc	atttacgtca	720
atacaagtat	atacagttaa	tacagaacat	gggtcttattg	aaagtaaaaa	ttatgatata	780
aatagtggaga	ttccagaaca	atgtgaagca	atttccacaa	actgtttctt	aaacgggaagc	840
ctagacgtag	aaaatttgcta	ccattgtact	ttactagcta	aaaagggtgga	tagtaataac	900
gaatgcttta	attacgtttc	taaggaagca	aaagaattaa	ttaataaaaa	tttggaaaga	960
aaaaataaaa	cgtttaaagg	agaagacgag	gatttagatt	ctaacgaaca	aaaattagaa	1020
gaatccattg	ataacatttt	aagcaatata	tataaaaatt	atgaaagcaa	acaagacaaa	1080
gagagaaaaa	aaagtcatta	caataataag	aaagaattag	ttactataga	agaattgaat	1140
agtggtcttaa	aaattgaatt	attaaattat	tgtaaattat	taaaagaagt	agatagaagt	1200
ggaatgttag	atcatcatga	aataggtaat	gaaatagata	tatttaataa	cttgataaga	1260
ttattaaaag	cacatccagg	agaaagtact	tatgtattaa	atgaaaaatt	aagaaatcct	1320
gctttatgtt	ttaaaaatat	agaagaatgg	ttagtaaata	aaaaagggtt	attattatca	1380
aatgaaaaaa	tacagaattt	atcaacaatg	aattacaatg	tgacagattt	agaagaatca	1440
gaatatgact	atgaaagatt	tatatcagat	gatatgtttg	aaaaggatat	gaatgggtgt	1500
attgacttaa	gtttatttga	taatgaaaag	aaattaaaat	ctccttattt	cagaagaaat	1560
aaatattgta	ataatgaata	ttgtgataga	tggaagata	aaacaggatg	tatttcaaaa	1620
atagaagtag	aagaacaagg	taattgtggt	ttatgttgga	tatttgcata	taagttacat	1680
ttcgaaacta	ttagatgtat	gagaggatat	gggtcatttca	gaagttcagc	attatatgta	1740
gctaattgtt	cggatagaga	ttctgatgaa	atatgtttcg	tcggatcgaa	tccagttgaa	1800
tttctagaaa	ttgttgaaga	aaccggattt	ttgcccttag	aatcagatgt	accatattat	1860
tatacagatg	caggaaaacga	ctgtccagaa	ccagaaaaaa	attggataaa	tttatgggga	1920
agtaccgaat	tattaaatca	taaacgtcca	agacaacgta	tgactacaaa	aggatatatt	1980
tcatatgaaa	gttcttattt	ctcagataat	atggatttat	ttatcaaaat	aataaagaga	2040
gaaattcaaa	ataaggggtc	tgtaattgca	tatattaaaa	cagaaaatgt	tatagatttt	2100
gatttttaatg	ggaaaggagt	tcataatatg	tgtgggtgata	aagaacctga	tcattgtgct	2160
aatattattg	gatattggtaa	gtattattgat	gaagaagggtg	aaaaaaaatc	atattgggtta	2220
ataagaaaaa	gttgggggta	ttattggggg	gatgaaggaa	atttcagagt	agatatgtat	2280
ggaccatcat	attgtaaata	taattttata	cacacgggtg	ttgtatttaa	agttgattta	2340
ggaattattg	aagtacctaa	aaaagaaaaa	gagtcagaat	atttcagtta	cttttttaaaa	2400
tataccacaa	atttcttgta	taatctcttc	tttaataatt	atactacaaa	tgatgagtat	2460
aaattaaata	atcgacttaa	gacaaatcaa	cataataaca	agaaaaataa	aaaggaccgt	2520
tatatctctg	ccaagatga	gccacctact	gataatgtag	aatcacaagc	agaaaaatac	2580
aaaaaaacag	aaatttatca	tatttttaaa	catattaaag	ataaaaaaat	caaaagaggt	2640
ttagttaaat	atgaaagctt	attagaaacc	aaaaaggatc	attcatgttc	tagaacacat	2700
tccatagatc	cagaaaaaca	tgaagaatgt	aatcaatttt	gtatagataa	ttggaaaagca	2760
tgtaaagacc	attattcacc	aggttattgt	ttaaccaagc	tctatacaaa	agatgataat	2820
tgtttttttt	gtaatgtgta	a				2841

&lt;210&gt; 276

&lt;211&gt; 3126

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 276

atgatatttt	ttatttttaa	attaacacaga	atgatatgtc	ctattttttt	cctttatata	60
ataaatgtgt	tattttacgca	atatttttatt	aaatgtgaag	gaaataaagt	gactgtgata	120
tcacataata	atggacataa	cgataatttta	gatgttaata	aaaatgggtg	gatattctcag	180
gaaaatgtat	ttgatacttc	agaaaagttaa	aattttacctt	caaataaaaa	agttgggttc	240
gatgatttga	atactacaac	tattttcattc	actgtaccag	ataatctgga	aaatgaagta	300
aaagttgtat	cgatcatctga	atcgggaaaaa	ggtgccactg	tatctcatac	gaaagtgaca	360
tctgaagggt	tgctgtgatac	gcaaccacaa	gtaacccaat	cggtatcttc	atctacgcat	420
acaccagggt	ctctagattc	aacaatgtct	acagaacagc	atagtagtgt	atcacaatct	480
tcacttccaa	ctgaatcatc	atctgaaact	ttaaataaag	ctactgttcc	tgaaattcct	540
attcaataaa	attctggact	tttaaaaaat	tataatgggg	ttaagggttac	gggatcatgt	600
gggtcatatt	tcagagtata	ccttggttct	cacatcttaa	tttatgcctt	aacaaaatac	660
agcgtataac	aacttgagtc	cttattcaat	gataacgcaa	ggattgatgt	tgagcacaa	720
ggggaacttc	aaaataaaatg	ttctgaagga	tatcatttta	aactagttgt	ttatataaca	780
cataatgtgt	taaacctcaa	atggaaaaca	tataagccta	acgaagaatc	aaagagtga	840
qattcggatg	taagaaaata	cagaatccca	aaattggaac	gtccattttac	ttccatacaa	900
tatacag	caaatagttaa	ggccgggggt	attgaaaacga	agaattataa	tataaggacc	960

gatattcctg	atacttctga	tgcaattgcc	actgactggt	ttttgaatgg	taacgttaat	1020
attgagaaat	gcttttcaatg	taccttgcta	gttcaaaaaa	aagataaatc	acatgaatgt	1080
tttaagtacg	tatcaagtga	aatgaagaaa	aagatgaacg	aaataaaaagt	caaggcacia	1140
gatgatttca	atccgaatga	atataaatta	atagaatcta	ttgataatat	attgagtaaa	1200
atatataaaa	aagcaataaa	accttttgaa	attagtaaag	atttaattaa	tttagaagat	1260
ttagattatc	aatttataaaa	tgaattatta	gaatattgta	aattattaaa	aaagggttgat	1320
actagtggaa	cattagaaga	atacgaatta	ggtaatgcag	aagatatata	taataatttg	1380
actagattgt	taaaatctca	ttctgacgaa	aatattgtaa	ctttacaagg	aaaacttaga	1440
aatacagcta	tctgtataaa	gaatgttgat	gaatggatat	taaataaaaag	agggtctaaca	1500
ttacctagtg	aatcacctag	tgaatcatcc	agtaaatacag	atagttatct	taacactttt	1560
aatgacaagg	ataaaaacga	agataaggat	gatatgagta	aaaattcgaa	ggaggagttt	1620
aaaaatgatg	acaaagaaaa	ttctgatgac	caaaaacaata	atgattctaa	taaaaaagat	1680
gatgagaata	atataaataa	tggtgatact	aattatgttt	atgattttga	tgatgatgat	1740
tatgataaca	atagttatga	gaaagatatg	tatgaaagcc	ccataaagga	aaataagaat	1800
gggtgttattg	atttagaaaa	atatggtaac	caaataaaaat	tgaaatcacc	ttatttttaa	1860
aatagtaaat	attgtaatta	tgaatattgt	aatagatgga	gagataaaac	tagttgtata	1920
tctcaaatag	aagtagaaga	acaaggtaat	tgtggattat	gttggatatt	tgcatctaag	1980
ttacatttcg	aaactattag	atgtatgagg	ggttatgggc	atttcagaag	ttcagcatta	2040
tatgtagcta	attgtttctaa	gagaaaacct	atagatagat	gtgaagaagg	atcgaatcca	2100
ttagaatttt	tacgaatatt	agatgaaaag	aaatttttac	ctttagaatc	taattatccg	2160
tattcatata	caagtgcagg	taattcttgt	cctaaattac	caaatagttg	gacaaattta	2220
tggggtgata	caaaaattatt	atttaataaa	aaagttcatc	gttatatagg	aaataaagga	2280
tttatatcac	atgaaacatc	ttatttttaa	aataatatgg	atttatttat	agatatggta	2340
aaaagagaag	ttcaaaataa	aggttcagtt	attatatata	taaagactca	agatgttata	2400
ggttatgatt	ttaatggtaa	aggtgtccat	agtatgtgtg	gtgatagaac	acctgaccat	2460
gcagctaata	ttatagggtta	tggttaattat	attaataaaa	aaggagaaaa	acgatcttat	2520
tggttaatta	gaaatagttg	gagttattat	tggggagatg	aaggaaattt	tagagttagat	2580
atgttaggtc	ctaagaattg	tttgtacaat	tttatacata	ctgttgtatt	ttttaaacta	2640
gatttaggta	caatacatgt	acctaaaaag	aaatcttggg	aaaaaaatgt	ttatttctta	2700
agacataatc	ctgattttat	gtatagttta	tattataata	attatgaacc	agaaacatct	2760
caagattttg	aaagtgcagaa	tgattatgac	aatgcttttg	tacatggaca	aagcaatgaa	2820
tcagatgaaa	ctaataaaga	aggaaaaaat	gtccacaatt	ctgtggagaa	aaaaatacaa	2880
atactccata	tattaaaaca	cattaaagat	tcacaaataa	agagagggtt	agtaaaatat	2940
gataatataa	atgaaacaaa	agatgaacat	acatgttcaa	gagttaatc	acaggatgca	3000
gaaaaatatg	agaatgtaa	aaaattctgt	ttaaccaagt	ggaatgaatg	taaagatcat	3060
tattcaccag	gttattgctt	gacagattta	tacaaggag	aagattgtaa	tttctgttat	3120
gtataa						3126

&lt;210&gt; 277

&lt;211&gt; 2994

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 277

atgaagtcac	atatttcctt	gtttttcata	ttgtgtgtta	tatttaacaa	aatgtttata	60
aaatgtacag	gagaaagtca	aacaggtaat	acaggaggag	gtcaagcagg	taatacagga	120
ggagatcaag	caggtagtac	aggaggaagt	ccacaaggta	gtacgggagc	aagtccacaa	180
ggtagtacgg	gagcaagtcc	acaaggtagt	acgggagcaa	gtcaacccgg	aagttccgaa	240
ccaagcaatc	ctgtaagttc	cggacattct	gtaagtactg	tatcagtatc	acaaacttca	300
acttcttcag	aaaaacagga	tacaattcaa	gtaaaatcag	ctttattaaa	agatttatatg	360
ggttttaaag	ttaactggcc	atgtaacgaa	aatttcataa	tgttcttagt	tcctcatata	420
tatattgatg	ttgatcacaga	agataactaa	atcgaattaa	gaacaacatt	gaaaaaaaca	480
aataatgcaa	tatcatttga	atcaaacagt	ggttcattag	aaaaaaaaaa	atatgtaaaa	540
ctaccatcaa	atggtacaac	tggtgaacaa	ggttcaagta	cgggaacagt	tagaggagat	600
acagaaccaa	tttcagattc	aagctcaagt	tcaagttcaa	gctctagttc	aagttcaagt	660
tcaagttcaa	gtttcagttc	aagttctagt	tcaagttcag	aaagtcttcc	tgctaattgga	720
cctgattccc	ctactgttaa	accgccaaga	aatttacaaa	atatatgtga	aactggaaaa	780
aacttcaagt	tggtagtata	tattaaaggag	atacatataa	tacttaaatg	gaaagtatac	840
ggagaaacaa	aagatactac	tgaaaataac	aaagttgatg	taagaaagta	tttgataaat	900
gaaaaggaaa	ccccatttac	taatatatac	atacatgcgt	ataaagaaca	taatggaaca	960
aacttaatat	aaagtaaaaa	ctacgcaata	ggatcagaca	ttccagaaaa	atgtgatacc	1020
ttagcttcca	attgcttttt	aagtggtaat	tttaacattg	aaaaatgctt	tcaatgtgct	1080
cttttagtag	aaaaagaaaa	taaaaatgac	gtatgttaca	aatacctatc	tgaagatatt	1140
tgaagttaaat	tcaaagaaat	aaaagctgag	acagaagatg	atgatgaaga	tgattatact	1200
gaatataaat	taacagaatc	tattgataat	atattagtaa	aaatgtttaa	aacaaatgaa	1260
aataatgata	aatcagaatt	aataaaatta	gaagaagtag	atgatagttt	gaaattagaa	1320
ttaatgaatt	actgtagttt	acttaaagac	gtagatacaa	caggtaacct	agataattat	1380
gggatgggaa	atgaaatgga	tatattttaa	aacttaaaga	gattattaat	ttatcattca	1440
iaaaaata	ttaatacttt	aaaaaataaa	ttccgtaatg	cagctgtatg	tcttaaaaaa	1500



gttgatgatt	ggattgtaaa	taagagaggt	ttagtattac	ctgaattaaa	ttatgattta	1560
gaatatttca	atgaacattt	atataatgat	aaaaattctc	cagaagataa	agataataaa	1620
ggaaaagggtg	tcgtacatgt	tgatacaact	ttagaaaaag	aagatacttt	atcatatgat	1680
aactcagata	atatgttttg	taataaagaa	tattgttaaca	gattaaaaaga	tgaaaaataat	1740
tgtatatcta	atcttcaagt	tgaagatcaa	ggtaattgtg	atacttcatg	gattttttgct	1800
tcaaaatatc	atthagaaac	tattagatgt	atgaaaggat	atgaacctac	caaaatttct	1860
gctctttatg	tagctaattg	ttataaagg	gaacataaag	atagatgtga	tgaagggttct	1920
agtccaatgg	aattcttaca	aattattgaa	gattatggat	tcttaccagc	agaatcaaat	1980
tatccatata	actatgtgaa	agttggagaa	caatgtccaa	aggtagaaga	tcactggatg	2040
aatctatggg	ataatggaaa	aatctttacat	aacaaaaatg	aacctaatag	tttagatggg	2100
aagggatata	ctgcatatga	aagtgaagaa	tttcatgata	atatggatgc	atttgttaaa	2160
attattaaaa	ctgaagtaat	gaataaagg	tcagttattg	catatattaa	agctgaaaaat	2220
gttatgggat	atgaatttag	tggaaaagaaa	gtacagaact	tatgtgggtga	tgatacacgct	2280
gatcatgcag	ttaatatgtg	tgggttatgg	aattatgtga	atagcgaagg	agaaaaaaaaa	2340
tcctattgga	ttgtaagaaa	cagttggggg	ccatattggg	gagatgaagg	ttatttttaa	2400
gtagatatgt	atggaccaac	tcattgtcat	tttaacttta	ttcacagtgt	tggttatattc	2460
aatgttgatt	tacctatgaa	taataaaaaca	actaaaaaag	aatcaaaaat	atatgattat	2520
tattttaaagg	cctctccaga	attttatcat	aacctttact	ttaagaattt	taatgttggg	2580
aagaaaaatt	tattctctga	aaaggaagat	aatgaaaaca	acaaaaaatt	aggtaacaac	2640
tatattatat	tcgggtcaaga	tacggcagga	tcaggacaaa	gtggaaaagga	aagcaatact	2700
gcattagaat	ctgcaggaac	ttcaaatgaa	gtctcagaac	gtgttcatgt	ttatcacata	2760
ttaaaacata	ttaaaggatgg	caaaataaga	atgggtatgc	gtaaaatatat	atgatacaca	2820
gatgtaaaata	agaaacattc	ttgtacaaga	tcctatgcac	ttaatccaga	gaattatgaa	2880
aaatgtgtaa	atztatgtaa	tgtgaactgg	aaaacatgcg	aggaaaaaac	atcaccagga	2940
ctttgtttat	ccaaattgga	tacaaataac	gaatgttatt	tctgttatgt	ataa	2994

&lt;210&gt; 278

&lt;211&gt; 2889

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 278

atgaagatac	acattttttt	gatcgcaacc	atatatgtat	tatttagtga	aaagtttaata	60
aaatggacaa	ccgccagtac	tactcaagga	gggtgatacag	atacacatcc	aggtagctct	120
ccagggtgaag	gttcagatgt	tagtcaaggc	gcagggtcaag	atgctagtca	agggtgcagg	180
caagatgcta	atccagatcc	aactctacct	aaaccaccaa	gtcctcctgc	tgatgatata	240
aaagatactg	gttcccaagg	agatgccgat	tcttcatctt	caaaaaataga	aatccctcca	300
ttagtaaagc	ctgaaaatca	taaaactata	gtttctgtcta	tgttaaaaaa	ttataaagg	360
gtaaaagtta	ctggaacatg	tgggtgcagat	tttgggtttat	ttttagtacc	tcattatttat	420
gttcatgtta	aatcagaaga	tactgaaatt	gaattatcat	cagaattagc	accaccagaa	480
atgcaaacaa	aatttgataa	gactcaattg	aaaaaatttt	gtgtgaaaga	tgacacaaaa	540
aaatttgatt	tcatagcgta	tatttataag	gatatacctag	tttttaaatg	gaaagtatac	600
gaagaaggat	tatccaagga	acaagatgtg	gatgaaatga	agttatttatt	accaaaactta	660
aagcaaccaa	taacatccat	tcaagtacat	agctggacag	gaactaaaga	atcttacata	720
cttgaaagta	aagattatgt	cttagggaga	ggaattgcctg	aaaaatgtga	tgctatagct	780
accgactgtt	tcttaagtgg	atttactgat	atcggaatat	gtttccaatg	ttaattgttta	840
atgcaggaaa	aaaatataaa	tgattcttgt	ttcaaatatg	tctctagtaa	tcaaaaggaa	900
ttataaaaga	agcaattaaa	aatcacagca	caagatgatg	aggaatctag	cgaatatcat	960
ttgagcgaat	caataaagaa	cctattgaaa	aatatataca	aaaagaataa	tgatgataat	1020
aagaaaaaag	aactattaca	ttttgaaaat	gtgaatagtg	ctttaaaatc	tgaattatta	1080
aattatttga	atztattaaa	agaagtaaat	atgaatgggtg	ttttgaaaga	tcaccaatta	1140
ggtaatgtac	aagatgtatt	taataactta	acaaaattat	tagaagaaca	taaagaagaa	1200
aacgataatg	tactttatca	taaaatgaaa	aatgaagcat	tgtgttttaa	aaatgtaaat	1260
gactggatga	aaaataaaac	aggattacta	ttaccacaat	tatcatatga	tctaacatat	1320
aagaacaata	attttacaga	attcacacaa	aataaaagtt	acacttctca	aaatattgta	1380
gataaattat	attgtaatca	tgaatattgt	aatagattaa	aagatcataa	taattgtata	1440
tccaaaataa	atgtagaaga	tcaaaagaat	tgtgccttat	catgggcctt	tgcatctaaa	1500
taccattttag	aaactattaa	atgtatgaaa	ggatatgaac	ctctaaatgc	atctgtatta	1560
tatgtaacaa	attgtcttaa	aaataaaaaa	aaagatgtat	gtactgaagg	atcgaaacct	1620
ttagtgttct	tagaaacat	tgaagaaaag	ggattcttgc	caacagaatc	gaattatcca	1680
tatgatcaat	ctaaagttag	agatatatgt	ccacaattac	aaaatgattg	ggataatgta	1740
ttcgaaaata	caaaagtatt	agattataac	aatggacctt	tttctgtcgg	tactaaagga	1800
tatattgcct	atgaaagtga	agcatttcag	aaagatatgc	attcatttgt	taaattagta	1860
aaagatgaaa	taatgaacaa	aggttcagtt	attgcttatg	taaaagctga	aaatgttttg	1920
ggttatgaac	taaacggaaa	gaaagttcaa	aacttatgtg	gtgataaaac	acctgatcat	1980
gtagttaata	ttgttgggtta	tggtaattat	ataaataata	aagggtgagaa	aaaatcctat	2040
tggattgtaa	gaaatagttg	gggtaaatat	tggggagacg	atgggttactt	taaagttgat	2100
atgtatggac	catcaacatg	tgaagataat	ttcattcata	ctgtagtagt	atttaatgtt	2160
caagtaccta	taaatgaaaa	atztatgaa	aaggagcatg	atatatataa	ttactacttg	2220

aaaacttctc	cagaatttta	tcacaacctt	tactataaaa	catttaattc	aaacaaagag	2280
gaaaaatcta	tgaacaagaa	ttcttatgtt	tatgggtcaag	atacgacacc	agtagaaaaat	2340
gaagcaccga	gaagtggagt	acaaaaaccg	acagaattat	catcaactga	atctcaaaaca	2400
gtatcaccac	caaatgaate	tcaaacagaa	tcgttattaa	gtggagggttc	acaagtaaca	2460
aatccaacgt	taacacaaag	tacatcctca	tcaagcggac	aacaagaaac	agggccctta	2520
tcaacacaag	gactatcacc	agcaactgga	gatccaaaag	gaaaagaaca	agaagcatca	2580
ccggcagaag	gattatcagg	agtattaaat	cctacgaagg	aagttacatc	tgaagaaaag	2640
atccaaataa	tacatctatt	gaaacatata	aagaatagta	aaattagaag	aggttttagtt	2700
aaatataatc	atgaatttga	agtaggagat	aattcttggt	ctagatctac	ttcaaaaaat	2760
gcagaaatgc	atgatgaatg	tgtaaacatt	tgtgaaaaat	attggcctga	atgtagagga	2820
acggctgttc	ctggatattg	tttaagtaca	catgatgaca	aaaatgaatg	tgatttctgt	2880
tatgtataa						2889

&lt;210&gt; 279

&lt;211&gt; 2793

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 279

atgaagttca	gtatttcctt	atttctaata	ttgtgtgtct	tgttttgtaa	aatgacata	60
aaatgtacaa	cagtggacga	gagtaccaag	gaaggttctc	aaaatcctaa	aaattcatcc	120
tctactacac	ctgcatctgg	atctcaaaag	ggtagtctct	ctgaatcacc	aggttcaagc	180
gtagagaaac	aatcacaaga	atccaataaa	gaaagtacca	atggtggtaa	tgttgtaagc	240
caaggctact	ctgctaatac	ttttgggtcaa	aattctaata	atccttccga	ctcaccctcaa	300
gggtactagca	ctcttccaag	tcctcctaaa	tcaattgatg	taaaatctgc	tttcttaaaa	360
cattacaaag	gagtaaagggt	tactgggttca	tgtaatgcaa	attttcaatt	atttcttggt	420
ccacatatat	tcataaacgt	tgaaacaaaa	gaaaataaca	ttcagttgga	tgtaaaaattt	480
ttgaaattaa	ctaaaagaat	agatttttgca	aaagataaaa	gtatgttaaa	gaataaatgt	540
gaatctggaa	aaaaccaaac	atttaaattt	gtattatatt	ttaaagatga	tatactaaca	600
ataaaatgga	aagtatacga	agagaaatct	gtactccac	aaaaatctga	agaaaatata	660
gtagatataa	aattatacaa	gttaccaaaa	ttagatcaaa	caataacctc	aatacaagta	720
cataccctat	ccatagaagg	aacgtcttat	ttaattggaaa	gtaaagatta	tagtttagga	780
aataatttgc	ctgaaaaatg	tgacgcaata	gcttcagatt	gtttcttgag	tggaatatatt	840
aatgtagaaa	aatgttttaa	atgtaccttg	aaagtaaaaa	aggtagaagc	ttctgacgaa	900
tggttacaagt	atgtctcaaa	agataaaacc	aaagaaacaa	aactagctgt	gtcaggaagt	960
gaagtgaagg	aagtaaaagc	tgcatcagtg	gatcattcaa	atgataaaga	atatgaactc	1020
tctcaatcca	ttacaatat	attgaataaa	atgtacaaaa	aagagagcaa	tgatgaaaaa	1080
aataacaaaa	aggaattaat	caaattagaa	gatgcagatg	atagtttaca	aaaagaatta	1140
aataaatatt	gtaactcatt	aaaagaagta	gatttaaatg	gagtattatc	aaaaaatgaa	1200
gtaggtaatg	aaaaagatgt	attcaataat	ttaacaacac	tattaaaaga	acatatgtta	1260
gaaagtcata	atgttggttt	tgaaaaactt	aaaaactcag	cattatgtct	gaaaaatatc	1320
gatgactggt	taaaaaataa	aaacggatta	attgtaccac	catcaaaata	taaattaaag	1380
gatacaaatg	aaaagaagaa	attaaataat	aatgttgagg	ttattgaaga	tatgttttaa	1440
gcaaatgaac	atggaattgt	tgatttaaca	aaatttccta	tagataccaa	ttattcatct	1500
tataaacaca	tagatcatat	atattgtaat	aatgattatt	gtaactgggtc	aaaagataaa	1560
aatagttgta	tatccaaat	aaatgtagaa	gatcaaaaaa	attgtgcctt	atcctggggc	1620
tttgcatcta	aataccattt	agaaactatt	aaatgtatga	aaggatatga	acatatcca	1680
atttcttcat	tatatatagc	aaattgtagt	aaaaatgaaa	agaaagatgt	atgtacagaa	1740
ggttcaaac	cattaaaagt	tttacaattg	attgtagaaa	aaggattctt	accaacagaa	1800
ggagattatt	catatgaaca	aagtaaaagt	gggtgaaacat	gcccagaagt	acaaaatggt	1860
tggtgtcaatt	tatgggcaaa	tgcaaaatta	ttagaacaaa	ataatgatga	gcacaattct	1920
ttaagtacta	aaggatatac	tgccatgaa	agtgaagcat	ttcagaaaga	catgcattca	1980
tttggtcaaat	taattaaaga	tgaaattatg	aacaaagggt	cagttattgc	ttatgtaaaa	2040
gctgacaaaa	taatggcata	tgaatttaat	ggaaagaaag	tacaaaactt	atgtggtgat	2100
aaaacacctg	atcatgcagt	aaatattatt	ggttatggta	attatataaa	tgatgaacat	2160
cagaaaaaat	cttattggat	tgtaagaaat	agttggggta	aacattgggg	agacaaaggt	2220
cacttcaaag	ttgatattgta	tgaccatca	gattgtgaag	ataatttcat	tcacagcgta	2280
gttatattca	atgttgattt	acctataaat	caagaatctg	ttaagaaaga	acctaaaaata	2340
tataactatt	atttaaaagc	ttctcctgat	ttttatcata	acttatatta	caaaaatttc	2400
gattcacaaa	aaggtaaagc	tgatcaagct	gaaaataaaa	agtcatatct	atatggacaa	2460
gaagaatcaa	cctcagaaca	actaccatca	tcattatcat	caccacaaaa	taataaacaa	2520
agtgaagat	ctaaggaaaa	agttgatata	ttccacgttt	taaaacacat	taaagatagt	2580
aaaataaaga	tggaataagt	taaatatgac	cattctgatg	ctcttggtga	agataacgta	2640
tggttcaagat	cctactcttc	aaacccagag	aaacaagaag	gatgtgttaa	attttgtaat	2700
gaaaattggg	gaaaatgtaa	agatgcagct	tccccaggat	tttgcttaag	tgaattagaa	2760
aaaacaaatg	attgtttttt	ctgttatata	taa			2793



&lt;211&gt; 3303

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 280

```

atgaagtttc atatttcctt ctttcttata ttatatattg tattttttta aaatacaata 60
aagagtgtaaa ccactacaga tgaatctgct acaggatcat tatcatccga tgggttcacgt 120
gtaacaacac aagcaagaat tgaaaaacca aaacaacaac caacattacc aacttttagct 180
caagaaacac aaccccaaca acagcaacaa caaaaagaag taggaagtgg tataggagca 240
gaacaaaaag tagaatcagc aagaccaggt gcagaagtat cccaatcaga tgtcgaaaga 300
gcaggaagat catcaggaac aggaggatcc gttagaacia agatatcacc tggatcacaa 360
gggcaaggga aagtagcagg accacaatta ccacgattac cacaattacc acaatccttt 420
gaacaaagta gaaatcaaca atcatctccc gtaacaccaa aaagaaatgg catttcacca 480
actaatgcaa aatccccaga gtctgttctt cccccagctc aatcattcac aaacttgaac 540
aaatccacta tccctcacac aattcctata aaatcttctt tcttaaaata ttataaggga 600
gtaaaaatta ctgggttcatt tgggtgtacaa tttcaattag ttattgtacc ccacttggtt 660
atztatgttg aaacaaaaga aaataatatt caattggaac ctcgatttat gaaattaaat 720
gaaagaatag attttgaaaa agataaatcc aatttaaaga ataagtgtga tgtaacaaa 780
aaacaatcat ttaaatttat attgtatctt caacatgatt tgataactat taaatggaag 840
gtatatgaag aaaaacctga caccactact aggatagatt taaacgttga tgtcaaaaga 900
tacaaattac caaaattaga tcaaccagtt atatctattc aaatacattc tcttgacag 960
gatggagaaa catatttaat ggaaagtaaa gattacaact tagaagatca aataccagaa 1020
aaatgtgagg ccacgtcttc tgattgtttc ttaagcggaa atgttgatat tgaaaagtgc 1080
ctccaatgta cattattagt tattaagggt gataaagaat atgaatgtct taaatatgta 1140
tctaaaaatg taaaagacag atttgaagaa attttaacaa agggagagga cgtatgcagat 1200
tccgatgaat atgattttat agcacctgca aattatatat taaaaaatat ttacaaaaaa 1260
aatgatacaa atggaaaaaa agaattatta catttcaaag atataaataa taatttgaag 1320
ttagaattaa taaattattg taatttatta aaggacaatg atgtaagtgg tatactgaca 1380
tatgaaaaat tgggtaattg acaagatata ttaataact cataaaaatg aaatgaagt attgtgttta 1500
cataaagaag aaaacaatta tgtactttat gaaaaataaa acaggattag tattaccaca attaaaatat 1560
aaaaatgcaa atgattggat gaaaaataaa gaataaggaa aattatatta agggaaacat ttttgaagaa 1620
tctttaataa agtttaataa ttttaacaaa ttcccagtag atacaagtta ctcatcatat 1680
gatgaaaatg gaattgttga ttttaacaaa ataggttaaa agatcataat 1740
aattatgcag atagtttata ttgtaatcgt gaatattgta ataggttaaa atgggccttt 1800
aattgtatat ccaaaataaa tgtagaagat caaagaatg gatatgaacc tctaaatgca 1860
gcttctatat accattttaga aactattaaa tttgtcttaa acgatgtatg tactgaagga 1920
tctgtattat atgtaacaaa ttgtctttaa gaagaaaagg gattcttgcc aacagaatct 1980
tcgaatcctt tagtgttctt agaaaccatt gatgtatgtc cacaagtaca aaatgattgg 2040
aattatccat atgatcaatc taaagtgtga gatataaca atgcaccttt tctgtcgtg 2100
gataatgtat tcgaaaatac aaaagtatta gatttccaga ttgcttatgt aaaagctaaa 2220
actaaaggat atattgccta tgaaagtga gtttccagta tttgttatgt tgataaaaaa 2280
aaattaatta aagatgaaat aatgaacaaa aaacggaaag tgttggttat ggtaattata taaataataa 2340
aatgttttgg gttatgaact aaacggaaag ggttaattata ggggagacga tgggttacttt 2400
cctgatcatg cagttaatat tgttggttat aaatagttgg ggttaattat tcattcatag tgtagttaga 2460
aaatcttatt ggattgtaag tgtatggacc accaactatg gaagataatt aggagcatga tatatataag 2520
aaagttgata tgtatggacc aagtagctgt aaatgaaat ttgtataaga actataaaaa ttataatttt 2580
tttaattgtg aaaactctcc agatttttac aagtagcatg agtgaggtat tgcataatac attatataat 2640
tcttacttga gaaaactacg tgtcaccaat agtagcatg agtagcatg gagaaggaaa actgcccgca 2700
gaaaactacg tgtcaccaat tttgggggca agaaactaca gatcctattg ctgaggaaaa tcaagggtcag 2760
aacaatttga tttgggggca gacatctacg tggggaggga aaaggaaatt cgggtggaaa aattacgaaa 2820
tctgaggcag caaatggagc tataagttca aatcaaagta caaccgatgg aaaaccaaac 2880
cgttcgaatg caaagatga cgggtgtagca ttacctgtat caaagaagt taccaaatcc aagagctaca 2940
caaggagaat ctaagatga ctgtagtaga tacaaatgat aacagaagt aacctgaag gtacctctgc tccgggaaat 3000
acatcatctt ctgtagtaga ctcttccagt acaaattcct atcccctaca gctgcagaaa aaagtagaaa agctcaataa 3060
tctctacaac tcacgaactc catcaattgt atcccctaca agaataaaga tgggattagt taaatatgat 3120
tctctatgta atattggtgg tgatcacgta tgttctagaa cttatgctgt aaatcctgaa 3180
aaacaagaag aatgtgtgaa attttgtgaa gaaaattggg agaattgtaa aaataagcct 3240
tccccaggat attgtctagc taaattaaaa aacacaaatg aatgcttctt ctggttatgta 3300
taa

```

&lt;210&gt; 281

&lt;211&gt; 3015

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 281

```

atgatgaaat taaatagaaa cgtgttggttc aaaaaagggg aaaaaattac atatagtgtgta 60

```

aaaagtgtta	tatttatcat	aaatgtaatt	cgtacaaggg	gggaggaaga	tgatgataat	120
aataatattt	caggtaaatt	aatttttagga	actagccata	ataatatatc	aaatatagat	180
ttatcttcta	ttcctaattt	ggatagtaac	atacatgcta	gtttttcaag	tgataccaaa	240
gaatgggtcac	ccaataatct	tacgtctaaa	aaaaaaaaaa	agaaaaaaga	aataagacct	300
aaagatatta	tgagtaatat	tgattcatct	aatacttcat	caataaataa	acaaaacaat	360
aatcaaataa	aatctgtttt	gttaaaaagaa	aataaaggag	taaaaattac	tgaccatgt	420
aatgtaaat	tgtcaatatt	tcttggtcca	catatatata	ttgatgttga	aacaaaatat	480
aataacattg	aattaaaata	tgagttggat	gaatttagtg	attcaataaa	attcaaagat	540
acaactacag	aattaagaac	ctctgatgat	actttaatga	ataactaatt	taatgtaggc	600
gtatcaagag	atactctaga	taaggataga	ttatataata	tatgtgcaga	aaataaaaacg	660
tttaaatttg	tagtatatat	taaagataat	atthttgacac	ttaaatggaa	agtatatgaa	720
acaggagtta	caaataacaa	agtagatatc	agacaatata	aaatgaaaga	actaacgaga	780
cctatcacaa	ccattcaaat	tcatagcgtg	tcagaaaata	aagacaccca	tttattggaa	840
agtaaaaaat	atgtttataaa	aacagacata	ccagaaacat	gtgatgttat	ggccaccaac	900
tgctttttga	gtggaaatat	aaatatcgaa	aaatgtctag	aatgcacctt	gcttgttcag	960
aataatgata	catcaagtga	atgcttttaca	tacgtttcaa	atgacgttag	agagaatttc	1020
aatcaaatta	aagcagaagc	agaggatgat	gaaaattttc	gtaattacca	tcttacagat	1080
actataaata	atatattgaa	aagaatatat	aaaataaata	aaaatgaagg	aaagaaagaa	1140
ttaataacac	tagaagaatt	agataattht	ttgaaagaga	gtataacaga	ttattgtaaa	1200
atattaagag	aaatagatac	gaatggaaac	ttagtaaatc	atgaattagg	taataatgtt	1260
gatgtattta	ataatttaat	aagattatta	aaattacata	aaaatgaaag	tataagtacc	1320
ttacataata	aattaagaaa	ttcagcaatt	tgtatgaaat	atcctgataa	atggatagaa	1380
aaaaaaacag	gtctcatatt	accaaattgta	gtaaaataata	atataatata	taataataaaa	1440
tatgaaaaat	tgaatgaaga	aaaaaaaaga	aaaatatatg	ataataaaga	tgatagtaaa	1500
attagtata	ttataaatat	taaaaaatat	atatttacta	ataatacatt	aaaatattht	1560
aataatgata	aacaattttg	taatagctca	ttttgttaata	gattaaaaga	tgaaaaataat	1620
tgcatatcaa	aaattcaaat	tgaagatcaa	ggaaactgtg	caatttcttg	gatttttggc	1680
tctaaatatt	atthtgaaac	tttaaaatgt	atgaaagggt	atgaaccaca	tgtctatttc	1740
gcattatata	tagtctaactg	tagtaaaaaga	aaacataaaa	atagatgtaa	tggtgggtct	1800
aatccattag	aattttttaca	aataatagaa	gaaaatcaat	tcttacctat	ggacacaaac	1860
tattttatatt	cttatacaaa	agtaggcaac	gattgtccag	atgaggagaa	aaactgggta	1920
aattttgttga	aacatacaag	aatgttaaat	tataataata	aacatagaag	taccttatct	1980
actaaagctt	atagagcata	tgaagtgaa	catttttaag	ataaaatgga	tacatttatt	2040
aaattaataa	aagatgaaat	aatgaacaat	ggttcagttt	ttgcttatgt	aaaagctgaa	2100
aatgttttgg	gttatgaatt	gaacgggaaa	aatgtttcaa	atttatgtgg	tgataaaaaca	2160
cctgatcatg	cagttaatat	tgttgggtat	ggtaattata	taaatgatga	agatgagaaa	2220
aaatcttatt	ggattgttaag	aaatagttgg	ggtaaatatt	ggggagatga	aggttacttt	2280
aaagttgata	tgtatggacc	atcaacatgt	gaagataatt	tcattcatac	agtagtagtg	2340
tttaatatata	atatgcctaa	gagtaagaaa	tcccctgtta	agataacatt	tccattatat	2400
aactattact	tgaaatattc	tcttgatttt	tatcataacc	tttattataa	aaattttta	2460
tctaagaaaa	gtatgaaatt	ggttaatgag	tctgatgaac	ataaaaacat	ttattcccaa	2520
gaagataagg	taaaaccataa	gaaagggaat	aagattttta	attctgaagt	aactacttca	2580
ttattatcac	aagaaatatac	acaaagacgt	ggtgaagatg	acgatataga	tacattaata	2640
ggagatagtc	cagatataaa	tgaacaggaa	aaaaatatca	aggatgaatt	taataaatcc	2700
tctataacac	ataatagtgt	atcatcatct	aatatcacca	aaagtaataa	gaatacaaat	2760
aagggttaaaa	tatatcacat	tataaaacat	gtaaagaata	caaaaataaa	aataggtht	2820
gttaaatcag	ataattataa	taccatagga	acgaatcata	catgtcctaa	atcttattcg	2880
gaagatacag	aaaaacatga	aggatgtatt	aaatthttgtg	aactccattg	gaatgaatgt	2940
aaagataaaa	catctcctgg	atattgttta	accaaactga	agggttcaaa	tgaatgtttt	3000
ttctgttatg	tgtaa					3015

&lt;210&gt; 282

&lt;211&gt; 3744

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 282

atgtgtactt	acggaatata	ttctgataat	aaatthttta	ttaagtctaa	ttataaagat	60
aattthttata	taagaaacaa	atgtattggt	gctcttgaat	taaaagggtat	atatgacaat	120
attaactatc	gatcctthtt	ttgtaaaaac	aaaagthtt	tttcacctgt	gtatctaagg	180
ggagatataa	tttataacaa	cgaccttaagt	aaggaaaaaa	ataataaaca	atcatattat	240
catatgaata	ataaaaaggag	taaagagaat	tccgggtttt	ataattctga	aataaatgca	300
ataaatgata	ttatgatcgg	ttatgaaaat	gaaggaggga	aaaaaaaagt	tcaaaggcaa	360
aaaaaatatc	atcaggaaaa	tgatgaaagg	gatgcatata	aaagaaataa	tgcaaatgat	420
gaagaagatg	ataaccgtga	acaagtagaa	aaaaataatg	aaggagaaaa	aaatgatgaa	480
ggaggaaaaa	aagggtgaagg	agaaaaaaaa	ggtgaaggag	aaaaaaaagg	tgaaggagaa	540
aaaaaagatg	aacaagaaga	acaaatccaa	cttgatgaag	attggcatag	tgatagggga	600
gcgaacaaaa	atccttccag	ggacacatat	aacaaaatta	taaataataa	ttactthtga	660
ctaaaagaaa	tttatatgaa	agaagaaaagt	gattthttta	atgaaaaata	tgataaaaaat	720

aaacatggag	atTTTTtataa	cataaaaaagt	gatgatctta	ataattcaaa	tattggagta	780
agacaaaagaa	aaaggaaaaa	aaaaaaaaaaa	gaaaaaatta	aagcaaaaag	aagaaaaaat	840
aaaggatatg	tatacgaagt	agaagatcat	ctagataata	ttacattatt	taatatatat	900
gaagataata	ttgctttata	taattatgta	tttaatttag	atgttaaaaa	tttcttttac	960
aaaaagggat	tattagacaa	ttcttacaaa	atgggaaata	ataatcaact	tgaaaataaa	1020
aataaaaaata	ataataatat	tattatgaat	aatttgaatg	caccatgtct	aattaattcg	1080
gtatcatctg	aaagaattat	gaacacggaa	taccagcatg	gtactcaaaa	atgtatagat	1140
aatattaaaa	atgatattaa	cgaaaaaagg	tataatgatc	atgatgatca	tattattaat	1200
gttgaacaag	aaaataatat	ctcacatgta	tttaataaga	agctatttga	aaaaaatata	1260
tacaatggat	ctcatccaaa	tgaaaaaagg	cattcactcc	aaaatgattt	accagaatct	1320
aatgataaaa	ttgtcaaaa	ctcaagcaat	aatgattatt	catttgagag	taccataaga	1380
aatgaaatag	ataaattaga	taatgatgat	gttgataata	ataatacaaa	taaatggaat	1440
gaaataaaga	agagaaaaaa	aaaattcaaa	agagaaaaaa	ataaaataat	aaataattca	1500
tttcaaaatc	aagaagcaga	agatgacaag	aacaataata	ataatgacaa	taataatgac	1560
aatcataatg	acaataataa	tgaaaaataat	aatgaaaaata	ataatgacaa	taataatgaa	1620
aataacaatg	acattaataa	tgacattaat	aacattcata	ataatgacaa	taattactat	1680
aataatgata	atataaaattt	atataacgag	atgacaaaaa	aaaaatgtat	gcttgataat	1740
agttatacaa	aatatttctt	ttatatattt	actctagata	tgttgccaag	cataaaattt	1800
gaaacattct	atgagaaaaa	taccgatcac	aaaaatttca	atgaaaatta	taaattttat	1860
tacaacaccg	atgatgatac	agatataata	aatgccataa	aaaaaaaaaa	cgtcaaaaat	1920
aaaaaaaaaaa	atggaaacat	tgtgattaaa	aatttatatta	atcataatga	atatagttaa	1980
ttagaatata	atgaaaaata	aaattatgaa	ataaataaaa	aggagaagtt	acttactgaa	2040
aattatgaat	atgatatgta	tataaaagat	aataacattt	ataatgatta	tagtgaaggt	2100
gatggaaagc	aaacaaaaaa	agcgtctctt	tttttatata	ataataataa	taataataag	2160
tataaaaaag	aagataataa	aacacagatt	ataagttata	tggatcatgt	ggataatgag	2220
aatggtgtga	agggcttgaa	aaaacggaac	ttattttata	ataacagcga	tcaattatat	2280
aactttgatg	tgaaagataa	tgatatgata	aagtatgaga	aaagacaatc	aaaaaatttt	2340
gttgaagaag	aattttattaa	tgggaataga	aaaatggaaa	acgaagataa	acatttaaaa	2400
aaacattatg	atgagaatga	tataaagaaa	aaaaagagga	aaaaagaaaa	agaagaaaaa	2460
caacaaaaaa	gtaaaagtaa	aaatacatat	ttaaataatt	tatccagaag	ttatatattt	2520
tttaattaaa	gaataaattt	attttctgaa	aataataatg	aagtagatat	aatttatgaa	2580
aagataaata	aagcatttat	agatttatat	aatattttta	tattctatat	atttatccat	2640
aatttatccc	catgttgtat	atgtagtata	agattacatt	tttcatttat	atcttttgat	2700
atattagaaa	ttatgttaac	aggacattta	ataaaagtca	aaaataataa	tgctattaat	2760
ttagaattac	aaaatatgaa	taaatcagta	caagaaaatt	tattaaaaca	tttttttaaa	2820
catttagaaa	attattatat	agaaaaatca	gagctattca	attatacaaa	tatgttttca	2880
aataatatag	ataaagtcac	tttaaaaaaga	aaaacaaaaa	gtgatatttc	tcaatttggt	2940
tatatgacca	aacgaagaac	aagtatgatg	aaaagtcaaa	gaaatatatg	gacttttctt	3000
tttaccaaaa	ttttccattc	tccactcttt	aattttactt	ccaaaataaa	aaatttattt	3060
ttaaaaaaa	acaaaaacaa	aaacaaaatc	aaaaataaaa	acaaaaacaa	aaacaaaaac	3120
aaaaaaacac	aaatacaaat	acaaatacaa	atacaaaaag	aattagagaa	agagaaagaa	3180
aaagaaaaag	aaaaatacaa	acaaaaaaa	aataataaca	ataataataa	tattaaaagt	3240
ccgatccata	aaaatatcga	ttccaaagaa	atagaaaaac	aaaataaaaa	aaaaaataaa	3300
ttacaattat	tacttaaaaa	aactgataaa	aaaatgtgga	atccatcaca	aattaataat	3360
aatattaatg	atagtatatt	cttatttgat	caattaaaaa	atttatattt	cttagaaaaa	3420
cgtaaaatat	tttttgaaaa	tcatatggaa	aatgaatttt	cttcaattat	tattacacct	3480
ttaaatgtat	tacctcatgt	tattattaaa	aaatattttg	gtgttatttc	attacatata	3540
gttaaagaaa	atattaactt	gaaaaagttc	gatttttttt	atcaaagtct	tatatcgagac	3600
atattattta	tagcaaaatc	tcatatcaaa	aatattggtg	ctaatttaat	ttcctcattt	3660
aaaataacga	acttgttttt	aagagaagaa	aatcacatg	gctatgccct	cataagtata	3720
tgtggggacg	tcgccaagtt	ttga				3744

&lt;210&gt; 283

&lt;211&gt; 903

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 283

atgagtaatg	ctgaggaaga	aacggtgaag	aagaaaaaaa	agtatcgtaa	agataaacca	60
tgggataatg	aaaacattga	tcattggaaa	gttgagaagt	ttacacaaga	agataacaaa	120
catcattttt	tagaagagtc	aagtttttaa	gtattatttc	caaaatatcg	tgagaaatat	180
ttacaacaat	ttagtagtga	tataaaaaat	gtattaaata	agcattttat	aaaatttgaa	240
attgatttaa	ttgaaggtta	tatgtgtgtg	aaaactacca	agaaaacatt	tgatccatat	300
attataataa	aatctagaga	tatgatattt	ttattatcac	gaagcgtccc	ctttgtacat	360
gcgaaacgtg	ttttagaaga	tgaaacatat	tgtgatatca	taaaaataag	tggttatggt	420
cgtaataaaa	ataaattttt	taaaagaaga	caaaggttat	taggaagtaa	tgcaacgaca	480
ttaaaagcac	tagaaattct	aacaaattgt	tatatatgta	ttcatgggaa	aactgttagt	540
gttataggtc	attttaaatc	actaaaagtt	gttagaagaa	ttattattga	ttgtatgaaa	600
aatatacatc	cggatatatca	tattaaagaa	cttattgcaa	aaagagaatt	agaaaaaaat	660

gaagaattca	aaaatgaaaa	ttgggaaaaa	tttttaccaa	attttaaaaa	aagaaatgtc	720
caagaaaaaa	aaattaaaga	aaaatttagat	aaaaagaaaa	agaaaaataa	atctgtcttc	780
ccaccagatc	agttgcctcg	taaaattgat	atacaaatgg	aaacaggaga	atactttttg	840
aataatcaaa	aaaacaaaaa	aaaagataaa	actcaagata	aacaacaaaa	aggaaacgac	900
taa						903

&lt;210&gt; 284

&lt;211&gt; 5409

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 284

atgcattttt	ataaaagaat	aaaacattat	agaaatattt	taatcaaatg	taatatatct	60
aatcataata	taatatatgg	gggatatgac	acgtgtcccc	ttaaagagat	atatacgaat	120
taccacgtct	ataaaagtta	tatacataca	aaagagaata	ttataaaagt	agaagcaaaa	180
gaaaatgttg	atatagataa	tataaataat	aaagatgata	tattttataa	taatgatcac	240
aaaattgatg	atgataaaat	aaaaaagata	caatgtcaaa	agaattgcac	catatatcat	300
gatatagaaa	aaaactctta	tgttgacatt	gatgattttg	ttaatataaa	tgatgcaaaag	360
aataaaaatag	aaaattttact	tttatacagt	aaaaagttat	ataataaaaa	gtattgtcat	420
aataaaattac	ttaataataa	acaaatcacg	ttaaataata	tagttttgaa	tactctttct	480
ataataaatg	gaaaaaataa	taataataat	attaaagata	tttatataga	taaagtcctt	540
cttttggtt	tttatactct	attaattaaa	agaaaatatt	atatacataa	tttaagaaat	600
aatattttatg	acaattcttt	tatgaatatt	tttgattata	ttcattataa	cattaattta	660
catttataaaa	attataaactt	gaaaaatact	catcaagttc	tacataatat	atccatatat	720
atacacaaaa	ataaatgtaa	taatatcaca	catgaacttg	ttaccaatat	attcttcttt	780
tcatttttta	aaaactttta	taagttttat	acaaaaaaag	aaggaaagga	taaaaatgaa	840
agtcacgaaa	attttcctaa	ttatgttaat	caaaaaaatc	acaatgattt	aaatataaaa	900
ataacaaata	attttcattg	tacaatgtat	caacaaaatt	attataaata	taaaagcttt	960
gatgaagaaa	cttttaaaata	tttaaataca	tatgtttgtct	ttttatctaa	tcactcttct	1020
tttattaacg	ataaattatt	gtataatatt	tcctctctta	caaataaaat	attacaactt	1080
aaaataaact	ttaatttagc	actatcattc	ctttcagcta	gcttaaatat	atttgacaaa	1140
cgagaaaaaa	aaataaaaaga	agggcacctt	attttgaaca	tataataaaa	aaaaacgaat	1200
tatgatatttt	tgatttcttt	aataaagcaa	cacaatgaaa	tgtttaacaa	taatatagat	1260
cataaagtgc	aaggggaaca	aaaggtgata	caacaagatg	tagccatgga	tggtattata	1320
agtatgcatg	taagtggagc	aaatcaaaat	gttcataata	taattagaac	aaatcacaat	1380
attgataaaa	taagtgaaac	aaatcaaaat	gttcacaatg	caattagaac	aaatcacaat	1440
attgataaaa	taagtgaaac	aaatcaaaat	gttcataata	taattagaac	aaatcacaat	1500
attgataaaa	taagtgaaac	aaatcaaaat	gttcataata	taattagaac	aaatcacaat	1560
attgataaaa	taagtgaaac	aaatcaaaat	gttcataata	taattagaac	aaatcacaat	1620
attgataaaa	taagtgaaac	aaatcaaaat	gttcataata	taattagaac	aaatcacaat	1680
attgataaaa	taagtgaaac	aaatcaaaat	gttcataata	taattagaac	aaatcacaat	1740
attgataaaa	taagtgaaac	aaatcaaaat	gttcacaatg	caattagaac	aaatgacaat	1800
attcataata	taattagaac	aaatcaacat	attcataatg	ttagtaaacc	aaaattagac	1860
atactgtcgg	aagagaagaa	aaaagatatg	gcacacacaa	tccatgtttc	caataatata	1920
catattaaaa	ataggtacac	tcataatttt	gttccatcca	aaaatgattg	tataaactta	1980
tggaattatt	cacatattat	taatataata	aaaatattag	acataaataa	attattatcc	2040
aaaaattata	atataaacac	ggaagaatgt	gtaaagacgt	ttttaaaata	tatgtttgat	2100
tatttatcaa	tatattacga	tgaactagta	ataattacac	aaaatgaatt	gaatagtttt	2160
gtttctattt	atgttaattt	atcaatatta	ttagaccagt	tgagaaatta	tgaagaaata	2220
tgttctctta	ttattttttt	tttaattaat	tcttataaac	gtatatatgt	atattttaat	2280
ggtttgaaata	taaatatgat	gattaattta	ataaaaagaa	tatatcatca	aatatatata	2340
tattcgaaaa	tatttgaaga	taataattta	ttttttgata	aatttaaaaa	agaatttaata	2400
acattatata	ataatataaa	aacggatcat	atgatattct	caaattataa	caatatgtat	2460
gaattaatta	atacaaacat	gatattttta	tcatacaata	tatgtaatac	catttttgat	2520
aatccattta	aaaaagatac	atatatacca	cttaataaat	taataactat	tattcattat	2580
ttagataaga	taaataaaat	atgcctttct	tatgatcata	caataaatat	atttttacaa	2640
caagatatat	taaaatgttt	gaaattttgt	gagaaaaatg	ttttgtcaac	aaaccataat	2700
ttttatgatg	aaaacttgtc	caatcatcat	atattaatat	taattaatat	atatatatat	2760
tattatcaaa	agttttttaca	ttctccattt	ttatataagt	gtctacaata	cttaagtaaa	2820
aagaatgatc	taacttttgtt	tattaatgaa	acggagatta	ttatgtacct	gaacatagtg	2880
aagaaactta	aagaaagaaa	aataaataat	ataaatgaaa	aatttaaaaa	tatcccaaat	2940
catttaaaac	aaataaaaaga	aataaaaacaa	gtaaaagaag	atatattaga	agatggaaat	3000
acaaagaata	tataccaaat	gattcataat	tataaaacta	atattactta	ccaaacaaaa	3060
aaccaagctg	taaccacatc	ctgctgttat	cataaatcat	cgcataataat	cttaaacact	3120
cagaaaaata	tatatgaaga	aaaaaaaaaa	aataatgttc	tattaaatga	tgattttatat	3180
gatgaaatat	tagaaaggta	tatgaataaa	ataatggaca	atcttttttt	ttcttctttt	3240
caaaaagtag	gaaagaaaaa	atatacacat	tggaatcttt	cttcttcttt	aatacaatat	3300
aataaaaatat	tagaagagaa	taaaaaggac	aaaacaataa	ataatgaaaa	tgatattatt	3360
aaaattgata	acaacaaaaa	tgaacaaagc	ataaatgtag	ataatatgta	tacatcatct	3420

```

aatgtacta aattcccttt taatattcat gatttcaaaa aatatttctat aaatatttcat 3480
tttttggttt atgacaatat acttttcatat aacaaaaaaa ttaataaaga agaaatagaa 3540
aaaatatgga atatttttaga taacatgata aaataataaac aaaatgtttt aacagaagac 3600
aatttctatt atattatttc tgcattattg aaagctcaaaa attttgaaca tgaagtgtat 3660
aaaatgtact atgaatatat gaaaaaatgt ggatcttgta ttaataataa atatgtattt 3720
tttattatga aaagaatttt tgaagatact ccatacataa catataaaca agatacatca 3780
ttagatattg ataaagagaa catattgaat aatttctataa aaaaatataa tataggatca 3840
acataattatt ataatatgaa atgtgataaa tatggtaagt gtaataaata tgataattat 3900
gataaatata atacattaaa tgatataata aaattatcag aacaaattat attatcccat 3960
atacattata ttaaaaaattt tacctttttt aaagaagtgat tacatactta tatgaaaaaa 4020
gatatatata taaaatgtta cttatttttat tatccacatt tccataattt tgtgttaaca 4080
tattttcata aatttttaac acatgatcaa ttcaataaaa atgttctagt tcttttaata 4140
aataatattg ctccctttta ttatacactt cataataata cttatacatc atcttacata 4200
ataagaaaaa aggacacaca aagggaatat gaaaaaatta ttaaagagaa aaaaataata 4260
gagcacaata atcaaaaaaa taaggaaaaa ttaataaatc attatgaaga taaaatata 4320
ttagatgagg aaatttttaa aggagatcat aaagataata aagtttttaa aaaatataa 4380
aatgggtatt attattcaaa aatattttca ttatacccat tagatcaaat acatttaaat 4440
attgaactaa agaaagaaga gatggttgca aaagataaaa caaatcaagg taacataggt 4500
tccaatttgt tgttaaccgg tgcccaaaa gatataacat catataatta ttatattgat 4560
acttatataa aaatggagtt attaaaaaaa ttaaatattt tgcttccaac tttatatata 4620
aaagaaataa aaacaaaaag tcctcatgaa ataaaattat caagtatgaa tattatagat 4680
atatttgtgt cattaaaaaa tgtaaaaaa agaatgaag atattatgta taaattagat 4740
cagaaatata ttatggatat attttttcat aataataaag taaaattaga atatcaata 4800
aagtttctta attctcttac atttctggat tatataaaag aagctgattt attattttaa 4860
actttttttt ttaaaaaaaa taaaataaat aaaatacaga aagaagaaaa aaaaaacaa 4920
aataattata accttttata tactcatttt ttaaaaatac caatacataa ttgtatatac 4980
attccaaata tatcatcata tatttttaaa ttatatctta tatatgatta ttttgaaaaa 5040
aaagatcaat atgtaatata taaaaaatta ttatatttcc tagatgaata tttaaaatca 5100
cataataaaa taaattcaat gaattcactt gataaacgta atattattct tataatcata 5160
ttattatata ttcatcatc acctcttaat atattatcca tacgattaca aacattacgt 5220
atattttatt attatataat acagtccaat tatttttcta agcacaacat aacatattcg 5280
tcttccacac atgctgatat ttctaaattt gttgtatcct gtataaggaa acattcaccc 5340
tatgttcata tatggaatga aataaatgta cattgttttg acgttgacat attattatat 5400
gggaaataa

```

&lt;210&gt; 285

&lt;211&gt; 6033

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 285

```

atgttaataa aacaagaacc aaaggaagtg gaaaaaaaag aagagaaaga aaaaaaagga 60
gcaagagaca aagggaaaga tttgttctct ttaataaaga agagagagag aaaaaaaaaa 120
gaaagccaaa agatagatag atatttaata aattcatgtg attctaataa aagtaattat 180
tcatgttgtt attttaaataa tgaatgtttt gtaaaaaata taagtatatg taaaaaatgt 240
atgtttagtt attttgaatt taaaaatgta acaaaggtta tatatatgag acatggagct 300
aggacacctt aaaaaaaaaat taaaaacatc tggcccttta aagaggggaa aggagattta 360
acttttttag gttttcaaca atcaataaaa gttggtgaat acttaagaaa atattattac 420
acattcaata aattaaataa aaaatataac aaaagggaaa ggggtctaag gattaacaat 480
aaagaaaagg gttatataaa aaaaaataaa tgtgatgtaa aaaaatgcaa aacattatat 540
aaaaataaat ataataataa taataataat aataataata attatgtaat aaatgaaaaa 600
tataatggat caaataaaaa cgattatgta aagaataaca catatgataa caaaggttat 660
tcataatttat atgacttatc tacctctttt aatgaacttg aaaataggaa gaggaatta 720
cataaatttc cttacctcag agattttata tattatgaaa agtacttttt aaaaatcaat 780
aaaagatcta ataaacatca aagaaaagta tttattaaaa ttaaaagaag aaggagaaac 840
aatattttga aaatttggtt acatcaacat ttgattaata aaatgaaaaa aataaaaaat 900
aaaaacatga ataattataa taaatgttat ataaaaattt caagcattcg taaaagaggt 960
tatcataaaa tggaaaatat agaattgtaat aataaaaaata atgatgatga ataatgatga 1020
gataataata ataataataa tgatgataat aataataata ataataataa taataataat 1080
gatgataata attattatta ttataattat aataatgatg aataatgatg aaaccccat 1140
gatgataata attattatta ttataattat aataatgatg aataatgatg aaaccccat 1200
tcattcaatt atgcagatat gttaaaatat acaaaatatt attacaaaaa cattttaaaa 1260
gataaaaaaa atatttacac aaataataaa aagaaagaat tattttttcc actaatggaa 1320
catttgtata tgtataaaaa aaactttttg attaataaaa tgaaagaaaa aaatataaaa 1380
aaaaaaaaaa aaaaatacga taaaattatt aagttaataa ataaatattt atgtattaaa 1440
acaacaaata gtgaacgttg caaattaacg gcatatggta ttatttgttg tatattagga 1500
ataagtgaat atatttattt tttctttttt atattatttt ttaaaagtaa ttatgataag 1560
acaaatgata ataatataga tacttatacc aaaagaaaaa gtgcttgaat 1620
aagaggtcca aatgttttca aaattggatt cttaataggg atattactag tgggcaatat 1680

```

aattgtatag	ataaaaaatac	cgcacctgtt	aaaaattata	ttattgggtga	aaattttatgt	1740
ggcgaaaatg	gatgtggtaa	aaatggatgt	gggtgatata	tacgtgggtga	tatatattgt	1800
ggtgatata	tacgtgggtga	taataactcc	attcccttat	ttagaagtga	cagaattatt	1860
tgtaaaacaa	gtaagattac	cttttgtgat	gagttatata	tatattttaa	taagatttta	1920
aaaagattac	aaagtcttga	tgatatgtac	aaaattaatc	atgaagttaa	aatgttttgt	1980
aacgataagg	atgtgttgaa	caattcttat	aagaaatgtt	atgataaaaa	tgattatgga	2040
tcataatccga	gttataataa	atattcgaat	gattataaaaa	gtcattatgt	tataaaaaaa	2100
atgaaaaatg	taaaatctgt	acaatgtagt	aatgaatcaa	ttatttttaa	agaaaggcaa	2160
gaaaaatgaaa	aaaaaaaaaaa	aaaaaaaaaaa	aaaaaaaaatg	aaaatacttt	tattaataat	2220
aacaatttaa	tgtacaatat	aaatgttttc	tttgatttaa	taataaacga	gagaggaaat	2280
ttccaatttt	tttataataa	tataaaaaaa	aaagacaaa	aaaatgaaaa	aggattagaa	2340
gaatggaatg	tgtataatat	ctttcaatta	tatatgaaat	atatattgaa	tgaattttca	2400
aaatttttta	aattatttaa	atttttaaat	aaaaatgttg	aaaatattga	taatacattt	2460
aacagtataa	ctaataatata	taataaatat	tatataaata	tggttgtaca	tagaaaagat	2520
tgttttgaaa	aaaagcaaat	acattcaaaa	gaacatatga	tgaaaaaaat	acatttgaga	2580
gataaattta	tagaatatga	aaaggagaac	gaaataatag	acaactgtaa	caacattaat	2640
atggataata	aaaaaaaagga	aataaataac	aattacaata	atatgattga	taataataat	2700
atagaaaatag	acatgtccaa	taatttttatt	tttacaatatt	attatatatt	ttatctttta	2760
aattatatgg	atacatatat	acaatttctt	ttttattatt	taaaaaatac	atatatcctt	2820
ttttccgtag	taaaagtagc	agaaagaaat	tctcttatgc	tgaaaactct	taagacgaaa	2880
aatcattata	ttaagaagct	aagaaatcat	attattcata	attcagatgt	ttataaaata	2940
ttaaataatt	attataagga	cgaaatattt	attgtttatg	atataactaa	atggacagaa	3000
aattgtatga	atactacaga	tatatattat	aatgatgtaa	aaaaaaatac	caaaatagat	3060
gatttagaaa	atatagacat	acctataata	acaaacgata	aagaagaata	tcattgtaaat	3120
aatagtatta	taagtgtatt	gaaaaaacat	aattcttcag	tttataaatt	aaaaaaaaaa	3180
ttaaaaaatt	caataattct	aaaagatcta	aaaaaattaa	attgtaattt	tataaataaa	3240
aattatatac	ataatacaaa	ttatgataaa	cataataaaa	tatatcaaga	taaaatcaaa	3300
aattggacat	atcatccttt	tcataataaa	aaaaaaaaatg	ttaaaattat	taaaaagttt	3360
ataagtgtct	atgatgcata	tatatatcat	ggtgttaatt	taaatcttaa	ttttaactga	3420
gcataagaaa	agttatccca	acatcctcct	tcaagtattg	atttaataaa	aaaggagtat	3480
ggacaaaata	attataattat	taatggtgag	ataaaaaaat	atgaagaaca	aaacaatttc	3540
attataaaaac	gtcctaatat	aaatatttca	ggtaaaaatt	tgtcttgcga	taataaaaac	3600
aattcttcta	atacacttca	aggaaatgat	agggagggcaa	atattttaga	cgcagatgaa	3660
cgcatagat	taaaaaagaaa	taaaaaatata	caaaatagag	cgaaagtaca	aaatggatg	3720
accataaata	ataattcaaa	aaaaatataga	aataatcaaa	cggaatatta	taaaaaaaag	3780
gaaaaaaaaa	aaaaaatatga	ccaaaaaaat	gatcaaaacta	atgaacaaaa	atgtgcacaa	3840
aaaaatgacc	aaacaaatga	acaaaaaaat	gaccaaacta	atgaccaaac	aaatgaccaa	3900
acaaatgacc	aaacaaatga	ccaaacaaat	gaccaaacaa	atgacaaaat	aaaaagggtt	3960
tataaaaaata	tatacacttg	ttacaaatta	atgtgtaaaa	acgaatatag	taataaatat	4020
ctttccttgt	tatgtagtgg	tatgtcgtta	atagatgtgg	ttattaactt	tataataaat	4080
gttagattat	atgaaaaata	taataaagaa	aataaaacta	ctaaatgttt	tattccacga	4140
attattttgt	atttaacaca	tcaatcatca	atattgtcat	ttcaatcggt	tgttaggtata	4200
cgaaaaaaaag	atatgaaaaat	acctcctttt	gctagcttta	tatctttaga	attaattcat	4260
attaaaaaaa	aaaaaattaa	aaatttaagt	aacaaattat	gtaatgtttc	caataatgaa	4320
aaatcttatt	gttatagtaa	taaatataat	attatgaaaag	gcgaaaaaaa	aaaacacgca	4380
tcattcacgca	gtgttcatgt	taatcaaacg	gatagaacgg	atgttctaag	ttttatttat	4440
cataataata	cagcaaatat	tttctgttgt	aaagatgatt	gtgtttggaa	ggtaagggaa	4500
acggaaaatg	agaaaaaagtt	tgaaaaaatgt	cgaaaaaaaca	aaaaatttat	gaatgaggaa	4560
aatgaaaatg	taataaaaaga	tgatgaaaaa	aatatatata	atatatttaa	aagaaatata	4620
aacgagaata	tagataagaa	aaaaagttat	aataataata	catgtatata	taatgacata	4680
cctacgaatg	tgaataataa	aaaatatgaa	agttattttac	ccaaatgttt	aaataaaatt	4740
catgatttta	aaaattttatt	ttattttatta	tgttataaaa	ataataacat	ccaagatctg	4800
atacagttgt	atgatatatg	cttaataaat	aattatacac	atataaaaaa	aaatatgcaa	4860
ttaaaagaag	gtaagaaaca	tggaaaagaga	aatttctatg	gatattttgt	taattttaca	4920
tttaataatt	ctgtaccctt	aaaattaaaa	aaaaataaat	taataaaaaa	atataacatg	4980
gggaataaaa	aagataaaga	agaagataat	aattatcata	atgataaaaa	taattatagt	5040
gataaatatt	tttatgataa	tcatgatacc	aataataata	ataataataa	taataataat	5100
aataataata	gtaataataa	taataataat	aatatatgtc	ttaagaataa	taaaaaaat	5160
ataatgcatg	aagatatcaa	tgcaaatata	agagaaagct	taaaaaaaa	aaaaaaaaaa	5220
aaaaaaaaaa	attgtatata	aaaaaataat	aatattttgt	aaaggaaaaa	atccaattatt	5280
cataataata	gttcaaaagta	catttttaat	actgtgagat	tctttaaaat	gaaagatatt	5340
gctaaaaata	atacaataaa	aaagtgtgat	gaaaaatagca	tatcatgtat	aaataacatg	5400
agagaaaaaa	gaaatatttt	taaaaactta	aatagaaata	ttttaaattt	taataatagt	5460
aataatgaca	aatatatgaa	ttatatatat	aatagtacta	atgtaacata	tggtaaaaaat	5520
tataaaaagaa	ttataaaaaa	agacgttcac	atcaataata	tattattaca	tacatataag	5580
caacataaaa	aaaaaaaaaag	tactattata	tcaagtgata	ataataataa	taataataat	5640
aatgctgaag	atgatatatc	gtcaagaaaa	ttaaaaattca	aggatataaa	aggaaatagc	5700
aaacaaaaat	atataaatga	tcataataat	attaatagtt	atgataataa	tattaataat	5760
ggtcttatta	atgaacacaa	aaatgtcctt	cacaatgaat	gtaaaaataa	aaataatcaa	5820
attataggat	atagtattaa	atatgataaa	aatgttgttt	cagaaaaatag	ttgttcagat	5880



gttattactt cattaaaaga taagaaaata aaaaaaagaa aaaaaaaatt acaaaaaaaa 5940  
aattatgaaa atgaaaatat cgtttgttta gattgtttta tttcttattt aaaaaagatg 6000  
ttaagaattt atggaaatcc agaaatatta taa 6033

<210> 286  
<211> 372  
<212> DNA  
<213> Plasmodium falciparum

<400> 286  
atgtttgtcg tattatccta tgtttatgga gtgtccttac aaatattaaa aaagaaaaga 60  
agcaaccaag tgaatttttt aaatagaaaa aatgattaca atttgataaa aaataaaaaac 120  
ccatctagct ctttaaaaag tacttttgat gatattaaaa aaattatattc aaagcaatta 180  
tcagtagaag aagacaaaat acaaatgaac tcaaatttta ccaaggattt gggggctgat 240  
agtttagacc tcgttgaatt aattatggca cttgaagaaa agtttaattgt tactatttct 300  
gatcaagatg ctttgaaaat taatacagtt caagatgcta tagattatat agaaaaaaat 360  
aataagcaat aa 372

<210> 287  
<211> 1497  
<212> DNA  
<213> Plasmodium falciparum

<400> 287  
atgatttttc agcattttct aagtttacac aatgaaaaaa agataagtat gttctttttac 60  
acatttttaa tattgtatat tagtcatgtg agaatttttt atgactgctt aaatttataaa 120  
aatgaaaaaa attacaatgt gcttttataaa aatggaaata ataatagtcc ctcctattat 180  
tttttaaaaca gtaattacag gaataataat aattttttta gaagaaagga aaattatcaa 240  
agagtacttc tattgtataa tcctaaattc aatgacgggg ctaaaaggaa tagttatatt 300  
tttatgtctc atagcaaaaa aaacaaaaat aaaaataaaa taaatcataa tattaatata 360  
acgaaaaggg aaacagtaag tagaagggac cgagatgatg aagatgataa ttatgacgat 420  
gatgatgaaa attatgacga tgatgatgat aattatgacg atgatgaaaa ttatgaagat 480  
gatgaaaatt atgacgatga tgatgaaaat tatgacgatg gtgaaaatta tgaagatgat 540  
gaaaattata acgatgatga aaattatgac gatgatgaaa attatgacga cgaatatgac 600  
gatgacgatt atcctttttaa caatgatgat atagacatag gtgataaaga tactccttat 660  
gaaacgcata aaagtataat aagggtcgaaa gatgaaaacg tggctcatca aaacaaggga 720  
ggtaatacat tgtcactaga aaattataaa ataaaaaaa atgctaattc tgatttagaa 780  
acagataaaa aaaataaggt aaaaaaaaaa caagacgaag aaatggatga acaaaataag 840  
aataataaga acgaaacaaa tgaaaaagat gaaaaagatg aaaaagaaga aaaagatgat 900  
aacataaatg ataataatga tgatataatg gaggacgaat atgaagagga ttacataacc 960  
gaagaacata ttaaagattt acataaaaata tgttcagaaa aaatgaataa agtttatgaa 1020  
tttttaaaaa aagaatctta tcgatttaatt ttaaataatg tttctaataa tatgtttgaa 1080  
aatgaaaaag tcaaaattta tgaacgtata tatacagtga aacatatatg tcatatttaag 1140  
aaaaaagaaa acttattttac tataacacca tatgatccat attttgttta tttcctttat 1200  
caacatttta taaaagaatt tgatgaactc aaattttatg tgaaggataa atccctttac 1260  
gctattatac cacctatatt agaaaattta aaaaatgaaa tcaaaatgaa atcctttttac 1320  
aaaattgaag attcaaaagt tacacttaga acagtaagga aacaaatgat ggataagtta 1380  
gaaaaattta aaaataaaat aggaaaggat atttatttta aacagaaaaa ttatatacaa 1440  
agtatacatg atcaaaccaa aaaaaatata gaaaaattat ttgctgatac aaaatga 1497

<210> 288  
<211> 708  
<212> DNA  
<213> Plasmodium falciparum

<400> 288  
atgaagggta aaggtagttt ttttttttgt tggattttct taatttcggt tctatatatta 60  
ataaatgtaa tagtatgtaa acaaaactatt ctttaagttat catatcaaat caattctttt 120  
aattctgatg ccaaaaaaaa ggaatggact aatatagggt cttttatttt aaacagtatc 180  
aaaatatatg atatatcgaa tacttatgtt gaagagaaaa ggaaatttct tgaaaaaatg 240  
aaaaatgttg aattacattt tgattacggt ttatttcaat tatgttatga tgaaagtaaa 300  
tgtttagaaa cctatgttaa taaagaaaac ataaaaata taaataattt tgtgttttta 360  
ttaggattag ataataatta tacacctttt atattaaatt ataaaaata taatcatgaa 420  
gaactataca atcaaaagat aaataaatat aataatgaaa taatatattc aaatcttttt 480  
attattaaat tccctacagt atcaacccc ataaatataa ataataaac aacagaagat 540  
attcatatga aacctaaaac acaaaaaaat gaaaaatta atgatcaaaa tcaacctaaa 600  
taattcttac gtaaatattg gtttattata ctttatattt tcttatcttt ttcattttct 660

aaacacttga cagaaaaatga accccagcca ccagataaca catcatga

706

&lt;210&gt; 289

&lt;211&gt; 7491

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 289

atggacaaga	aaaggacatt	ttattatttg	ttcttctttt	ttactttcct	tgtctacgtt	60
ttgtactttg	ataatatata	gagtggtgtg	agaagtagta	caaaaaaaaa	aaagaaaaaa	120
aaaattttgt	aatcgacctt	ttatgttcat	gaagagagtg	aagaaataaa	atcatggcta	180
aggaatagta	atgagagaga	taaggggaaa	aaatttttta	tatttgaaag	attgataaag	240
gagagaaaa	atatatgtgt	aaataaatac	aaaagaaata	ataaattaaa	atggatttat	300
aagaacacat	atgagaagac	aaagaatata	tgtgatgatt	ataaatattt	gtttaaatgt	360
ataaaaggaa	taattttatg	taaaaaataa	gaaacttttt	ttgaaacctt	ttttgaaaa	420
ttttgggata	atatatttta	tatgaataaa	tatatatttt	atatatacta	ttatatgttt	480
gattatacaa	aaaagggttaa	aaagaaaata	gaaggaaata	aggaaaatat	gaatattaga	540
cataataata	attataataa	tatatatttt	gttcataaat	tttttttatt	taatgatgat	600
gaagagaaaa	aaaaaagaaa	tgatgatata	aaaatttaata	taaaactaca	taataatata	660
agaaaattgt	ccgtcagcga	agaaaatggt	gaattaaaac	catatataaa	acaaggagaa	720
agaaatgaaa	cagttgttaa	tttatatgaa	tattttacag	gaggtgtaaa	gagatcaaat	780
aataataatg	aaattgtggt	aacgtctaca	gaacaatttc	atcgtattgt	tataatttgt	840
tttaaaccta	ctgtaaaaaca	ttcacataatc	attactagtc	cacatgatgc	tttaaatcat	900
atagtagaag	aaaatgataa	aataaaaatta	tctgaagaaa	tatatccaat	tcctttttat	960
ccaatatatg	ggaatttagg	tttaagaat	gttataacaa	caggtattgt	tgaatttatg	1020
attccatatt	tttctagaac	ccaaatgaat	tttacagtaa	cttggtgcaa	cggtgaaatg	1080
aatgatttgt	ataaatttga	agatttaata	aaaataagaa	tacgtatacc	tagaaatacc	1140
aaaaaaatat	taggactaag	taccaatgaa	aaagataaaa	cggattttga	aaggatagta	1200
gataatacat	caaattgaata	tcgatttaaa	agttataata	ataaaattgt	aggaataaaa	1260
ttagagaatt	ctatttttaga	tcctcctgga	tgttttaaaa	cagtatatga	agatgataaa	1320
atattacaac	tagaagtatt	tttacaatat	gtcaaagtga	ttaatctaga	tagggataat	1380
tataaaatac	gttttttttt	tcttctctgaa	gattttggag	atgaagaaat	agaatttagt	1440
tgtaaattta	cttataaaaa	aaaaacaagc	aaaatcatat	ttggattagg	agaaacaagt	1500
gttgataaag	atatatttta	tttagaagat	gaacatgtta	aattaaatat	taataaagat	1560
ataagtggag	atgaaccata	ttatagtcac	cttaattata	atgggtatacc	atataatatt	1620
tgtaaatttc	aatataaatc	tgaatacgat	tcacaagttt	gtgaaagaac	tatacatgaa	1680
ttttctttat	ttattttata	ttgtgatact	cttgtgggta	cacaaatata	aacgactgaa	1740
cctataacat	ctgtcaaata	tttaaaactca	acttatccaa	taaaataaatt	tagtgatatt	1800
actttatttaa	gtaaagatat	agatatagaa	ggattagagg	aagcttttcg	taattcaaaa	1860
ttttttttta	cttcatatat	aaatcatggt	ccattccctt	taattataga	atgtgttata	1920
tctaattcaa	ataaggatta	tcaaaatgta	tatatctctc	tgcatttaag	aacaagtata	1980
aaaaatagaa	gtgtatcatt	ttgctgattt	gaasaagtac	agggatataa	ttattttaaa	2040
aatttatattg	atggtaagat	atgtaatat	aatattacat	ctaattcagt	ctttgggttt	2100
agatgcccat	ctaatagtat	aaaagaacct	aaagattggt	tttcacaagt	atatatagat	2160
aaaaaagtat	ataaattaaa	tgataaatta	tcgaataaat	taattattata	ttctatgaaa	2220
caagaaaatc	ttgctatagc	tggttttta	aatattattt	cgaactcttt	ttcatttgaa	2280
tgttatttga	tagataagaa	tcaaacctat	tcttcttatg	aacgtacatc	aggagaagat	2340
atattttaac	atattgtaaa	aagaatacat	gttcattata	aaaattatga	tgaactttat	2400
gattataata	tacatgataa	aatcacatat	gaacctatta	tgaaaaacct	acctatcaca	2460
tatttatgtg	acttcttaaa	caaaaaacaa	atattacaac	ctttaaataa	taaaacaaaa	2520
aatttatatat	gtactatatg	gtatccaaaa	cctttaaatt	atatagcact	aaactgccca	2580
actaatcgaa	gggatgaaca	aaacgatcaa	accattctcg	aagtatatata	ttctttacaa	2640
aaagattttat	taaaaccaac	tggaaatcgaa	caacaatcgc	atcaaaaaaa	aaaagaacta	2700
aatgtgttat	tttaacaaaag	aaatattttat	tctaactctgt	atcattttacc	aaaaaatgct	2760
cctaaacgta	ctataaataa	aaatgggttta	aatattgttaa	atattgatga	aataatacca	2820
gggatttctaa	ttaaagatgt	cattaatatg	aaacttgaag	atgtaatcaa	acctgatcta	2880
tttaacacca	cgagcttttt	acacaaaaca	tataatacaa	acaaatcata	ttttttctca	2940
acacgaaata	aatcaacatc	tgtatttta	acaccattca	tatatacacc	attaacacac	3000
acaagctttt	ctatatctcc	aaaactcgggt	cctcttacca	aatctaggat	cgaagaaaca	3060
catagtagta	gcaatacata	cgaacaatat	ataggaaaaa	gaaacagtat	agaaaatgga	3120
ttcttcatat	ttcaactacc	tccatatttta	aaaaagaatc	agacaataga	atttgcatgc	3180
attaatgata	gcacaataaa	aaataagaat	gtaggaaata	acggcattat	gactatacat	3240
ttaaaatctt	ttgggaatcc	aatagaaggt	tgttattttt	ataagaattc	tgctaaatat	3300
aattattttaa	aaaaaagtat	aaaaatagat	gatctaaaaa	aagaagagtg	tactataaga	3360
agcgatggag	aaattgaatt	tgtaggtatt	atgtgtccat	atgaaaataa	tttatatttta	3420
acaccttcaa	ggtgtttttt	aaaaacatat	gataatcacg	ataatttagt	tgaattatta	3480
gatataaatg	aaaattttga	atattattct	aatgataaag	gtatatcata	tttaaaaatt	3540
cctcaagaat	ttcttaatac	tgttcattta	ttttgttatt	gtaatgttga	taaggatagt	3600
tttcagata	ctaattgtct	tgtgaaaaaa	gaaaataaaa	taagtttaga	attaaattat	3660



tcaaataaag	gttttaatat	tatcaaaaaca	attgattatc	aatatgaagc	tgatatactc	3720
ataggatatt	catattat	taagagggtg	acacctat	atcgaaaaaa	acatatatgt	3780
gattttacta	ccgaagataa	ttcttttaga	ccagaaagt	aagataaaat	gatatactca	3840
tgttat	ctttggaaaa	taattttaa	tttatagaag	tgaaatgtcc	aaaaataaaa	3900
aaaagtcta	attcagaatg	gttattttaa	tatgggacct	ttgacaaatc	gtcagaaata	3960
atggaagatg	atgaaaatat	aaaaaaatat	gaacacatga	aatatatgcc	agaagataag	4020
gatgaaataa	tatat	taaaaaacaa	aaacttgaag	atatattacc	aggtgtaatt	4080
atatttgata	aaaatagata	tttttttgaa	aaaggaaatt	tttcttttgt	gacaccatta	4140
attgttaaag	aagatgttac	tattaaatta	ttatgtgata	attcagagac	caaaaattgat	4200
gataaaatag	gtaagaagg	tattatctt	attaaaaatc	cacaacatat	tacagataag	4260
aaat	gttgtgatt	ttcaggtgat	tccaataaaa	aatcatcatt	ttattataca	4320
tctgtttatg	atttataaac	acaaaatcaa	tattgtgaag	ttaaattaaa	agaaaatatt	4380
attataagtt	taaattgtcc	taatgggaat	attaatccaa	ataattgttt	taataatgtt	4440
tttttaaaaa	caaatatgaa	cgaacaaata	catgaaaaaa	tacaaaatat	atttgatcaa	4500
gttaaagtta	ttataactaa	atcacatgta	ttattaaata	gttcatctac	atttttaatt	4560
atatccaaaa	ttacccaaaa	agaattaaat	tttttttgta	catgtcatca	taatgaaaca	4620
aaaaatgttg	gaaccatata	tataaaaaat	gaagatatta	ttacttttc	aaaagcatat	4680
aataaagaat	caagtatatt	acaatatata	gatgttacac	cgtattat	aaaagataca	4740
tatat	attttacaca	aaatcattat	tccatatctt	ttgatacttc	ggtaaagtga	4800
caaatgttt	tagaaagata	tttaaaaaata	ttatcagatc	tttataatac	acatgaagaa	4860
tttacaat	ttagtattca	tttaaaatta	aaaaagaaa	ttatgaaaaa	aaaatatata	4920
gattat	aaaaaaaaat	taatgaatat	aaagaaaaag	aaacttcgga	taaaatcaaa	4980
cgtgtaacgc	tctcaacaaa	cgataatata	aatactatat	tagtatatag	atgtaataata	5040
gatctagggt	cttttgataa	attcaaaaatc	aaatgtccaa	gcaaacttaa	tgaagaagaa	5100
gtagaaaaata	ataaattata	tctaatacta	atatatagtt	ctaatttagg	actagatgaa	5160
acagatatgt	taaattggatt	aaccaaatta	ttatatgggt	ctgttttaatt	aaataaaaca	5220
gaaaaaaacg	tttcttctt	tgaaaaagga	gaattagaat	taataatttc	tccatatact	5280
gattcatcaa	aaaatattat	tttctcatgt	gaaaaatgtt	ctagaaatct	atcaaaagga	5340
attataggtt	ctgcatctat	ttttattaaa	aaaaatgata	acaaaatttt	aggttgtgat	5400
tttatagaca	caccatcaac	attatcgtca	gcttcaacgt	tagaatcatc	ttatggatca	5460
catgcatcct	cacctttatc	atcatctcat	catgtattac	ataatgataa	tcaagggtcat	5520
gatgtacata	tgataaacca	tatagatatt	tccaacaaga	aaaattcatt	cgaattcgaa	5580
attgaactta	ttgaaggaaa	aaatacatat	tgtaatatcg	aagctataga	aatgatatt	5640
gtcggattta	gctgccctta	caattttctt	acaacaccaa	gtgattgttt	tgaatctata	5700
caaattgaag	gagtgataa	agaattagaa	acacataagt	tagaaaaatt	attaaaaggt	5760
gttaaaatat	taaataatga	tatatataaa	tataatttca	caccttcata	tattattttg	5820
ccccaaaaaa	ttaaaaaatc	actcaaaatt	ttttgtagat	gtaattctgt	aaaattaata	5880
aaaacaggta	ttattcaaat	taatatgtga	ggagacgac	taaataattg	gtttaaaaaa	5940
gaaattacac	ataacatatt	tgcatatcaa	aaaatggatt	atttttatga	tttttcaaaa	6000
ggaccaacaa	atataagctc	tgaaaaatgtg	ctaggcatat	ctacaatgtc	cttatgtct	6060
tcaaacaaaa	aagtatcaag	aaaaaaaaat	cacaaggagg	aaaataggac	acaacaaaaat	6120
gtttataaag	aaattgaaaa	cgatcataaa	aataataacg	aaaatgtaaa	taagtacgat	6180
aat	ttaccttatt	gtcaagtgat	gaggggtgatg	gttaccaggc	tgatgaagac	6240
atcggggggg	aggatgatgc	tgaagatgtc	gacggggagg	gtgatgatga	agatgataat	6300
attcttaacc	ctcttagaac	taaacaagta	tacgatataa	tcgtagctgc	ttcagagttt	6360
agtaaaatcg	aagttgtgtg	ccccttaaga	aattcttctc	aattcagaca	atccaaaaat	6420
agtcctgaga	atttttttga	gtatgtttat	gtattagaag	ataaaaaatga	tgataaaaga	6480
aagaggagta	tagaagaaaa	cgaaaaatta	gttaaagcaa	tacttgaagg	gaaaaaaaat	6540
atagatggac	atataataaa	tatagaagat	ataaataata	aaaagagttc	aaaaaatgca	6600
tcagtagaat	atgatgat	gggaaataaa	atatttatat	ctataatttc	agaaaaacct	6660
aaagctgtta	taggagataa	tatatcatct	agtcgttctt	ctgtacacat	atcaataaat	6720
attatgaata	gttcatttca	aagtaatat	catcctgatc	ctattacttc	agatactacc	6780
acatcagaat	atgagcaata	taatagttat	tttaaagata	tattagttat	aaaaaatata	6840
aatgaagtta	tatcttttgc	aaatataaaa	atagatataa	atgaacaaac	atattcaagt	6900
tcattacata	taccacctct	tatttttaaa	gatgcagaat	ttctaatttc	atgtgataat	6960
tctttaacgt	taaatgaaaa	tacacgtggg	aaaacagcta	ctgtaaaaat	aaaagttaaa	7020
tcgaat	taaaaaatata	tggatgtgat	ttttagggg	aattttcaac	tcatttctta	7080
tttagcaaaa	aatgggatga	tataccaaaa	aattatatat	gtaaaattaa	tatacaagat	7140
gatatgttaa	taggttttagc	ttgtccaagt	tttacaaaa	tacatccacc	agattgtttt	7200
gaaaaatatca	ttgtaaacca	aaatgtttat	aaaaaaaata	ttatcatgga	aacaaaaaat	7260
atgttctttt	ataaacaaaa	tgataaacct	atcttatcat	ttgttcatgt	gaaaaaaaata	7320
ctagtagaaa	catttttatg	taaattgttat	caagtaacca	aggcagatta	taaagaggta	7380
actatacaaa	tattgtacga	gccttatgta	atgggaacac	ctaaatatac	tttggaaaaa	7440
tctataatac	aatataggta	tgctaatttg	aagccaccac	tccacatata	a	7491

&lt;210&gt; 290

&lt;211&gt; 9408

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 290

atgaagaaaa	ttataacgct	gaagaatcta	ttcctcatta	tcctgggtata	catatttagc	60
gagaaaaaag	acctgcgttg	taatgtgata	aagggaaata	atattaagga	tgatgaagat	120
aagagattcc	acttatttta	ttattcccac	aaccttttta	agacacccga	aacaaaagaa	180
aagaagaata	aaaaggagtg	cttttataaa	aatgggtggt	tttataattd	atctaaagaa	240
ataaggatga	gaaaggatag	atccgtaaaa	ataaaaacaa	gaacatgtcc	ctttcataaa	300
gaaggaaagt	catttgaaat	gggttcaaa	aattattacat	gtttttatcc	tatcgtaggg	360
aagaaggaaa	ggaaaacact	ggacacaatt	attataaaaa	agaatgtaac	aatgatcat	420
gttggttagta	gtgatatgca	ttccaatgta	caagaaaaaa	atatgatatt	aataagaaat	480
atagataaag	aaaataaaaa	tgatatacaa	aatggtgagg	aaaaaatata	aagggatata	540
tacgaaaata	aagattatga	aagtgtgat	acacttatag	aatgggttga	tgataatata	600
aatgaagaaa	actttttact	aactttttta	aaaaggtgct	tgatgaaaa	attttcttca	660
cccaaaagaa	aaaaaacgtg	agtacaaaa	aaacataagt	ctaatttttt	tataaacagt	720
tcgttgaaat	atatatatat	gtatttaaac	ccctcggtata	gctttaacct	agtcgctga	780
aacagaaatt	tggatgagga	agacatgtcg	cccagggata	attttghtaat	agatgatgag	840
gaagaagagg	aggaggaaga	agaagaggaa	gaggaagaag	aggaagaaga	agaagaagag	900
gaggaggaag	aatatgatga	ttatgtttat	gaagaaagt	gggatgaaac	agaagaacaa	960
ttacaagagg	aacatcagga	agaagtaggt	gctgaatctt	cagaagaaag	ttttaatgat	1020
gaggatgaag	attctgtaga	agcacgggat	ggagatatga	taagagttga	cgaatattat	1080
gaagaccaag	attggtgatac	ttatgatagt	acaataaaaa	atgaagatgt	agatgaagag	1140
gtaggtgaag	aggttaggtga	agaggttaggt	gaagaggtag	gtgaagaggt	aggtgaagag	1200
gtaggtgaag	aggttaggtga	agaggttaggt	gaagaggtag	gtgaagaaga	aggtgaagag	1260
gtaggtgaag	gggttaggtga	agaggttaggt	gaagaagaag	gtgaagaggt	aggtgaagaa	1320
gaaggtgaat	atgtagatga	aaaagaaagg	caaggtgaaa	tatatccatt	tggtgatgaa	1380
gaagaaaaag	atgaaggtgg	agaaagtttt	acctatgaaa	agagcgaggt	tgataaaaaca	1440
gatttgttta	atatttataga	aggggggtgaa	ggagatgatg	tatataaagt	ggatggttcc	1500
aaagttttat	tagatgatga	tacaattagt	agagtatcta	aaaaacatac	tgacgagat	1560
ggtgaatatg	gtgaatatgg	tgaagctgtc	gaagatggag	aaaatgttat	aaaaataatt	1620
agaagtgtgt	tacaaagtgg	tgcattacca	agtgtaggtg	ttgatgagtt	agataaaatc	1680
gatttgtcat	atgaaacaac	agaaagtggg	gatactgctg	tatccgaaga	ttcatatgat	1740
aaatatgcat	ctaataatac	aaataaagaa	tacgtttgtg	attttacaga	tcaattaaaa	1800
ccaacagaaa	tggttcctaa	agtaaaaaaa	tgtgaagtaa	aagttaatga	gccattaata	1860
aaagttaaaa	attaatgtcc	attaaaaggt	tctgtagaaa	aatttatatga	tccatagaaa	1920
tatgtacct	aaaaaagccc	atatgttgtt	ttacaaaaag	aggaaactaa	actaaaggaa	1980
aaacttctct	cgaaacttat	ttatgggtta	ttaatatctc	cgacgggtta	cgaaaaggag	2040
aataatttta	aagaaggtgt	tattgaattt	actcttcccc	ctgtggtaca	caaggcaaca	2100
gtgttttatt	ttatatgtga	taattcaaaa	acagaagatg	ataacaaaaa	aggaaataga	2160
gggtgtgatg	aagtgtatgt	agaaccatat	ggtaataaaa	ttaatggatg	tgctttcttg	2220
gatgaagatg	aagaagaaga	aaaatatggt	aatacaattg	aagaagatga	acataatgag	2280
aagataaaaa	tgaaaacatt	ctttaccag	aatatatata	aaaaaaataa	tatatatcca	2340
tggttatatga	aatttatatg	cggagatata	ggtggtattc	tatttcctaa	gaatataaaa	2400
tcaacaacgt	gttttgaaga	gatgatacct	tataataaag	aaataaaatg	gaataaagaa	2460
aataaaaagt	taggttaactt	agtttaataat	tctgtagtat	ataataaaga	gatgaatgca	2520
aaatatttta	atgttcagta	tgttcacatt	cctacaagtt	ataaagatac	attaaattta	2580
ttttgtatga	ttattataaa	agaagaggaa	tgtaatttaa	tttctacttc	ttatttagta	2640
tatgtaagta	ttaatgaaga	attaaatttt	tcacttttctg	attttttatga	atcatttgta	2700
cctataaaaa	aaaccataca	agtagctcaa	aagaatgtaa	ataataaaga	acatgattat	2760
acatgtgatt	ttaccgataa	attagataaa	acggttcctt	ctactgctaa	tggaagaaa	2820
ttattttatat	gtagaaagca	tttaaaagaa	tttgatacat	ttaccttaaa	atgtaatggt	2880
aataaaaacac	aatatccaaa	tatcgagata	tttcctaaaa	cattaaaaga	taaaaaggaa	2940
gtattaaaaat	tagatcttga	tatacaatat	caaattatat	tcaaataaaa	atacttcatt	3000
taaccaccta	tataataata	tatatgacac	atgttttcatt	caaaaataact	atatatcaaa	3060
tcaacaagta	caaaattata	agaatgaaaa	aaatacaaat	atggagcatt	ataatgaaaa	3120
gaagctttttt	atttatccta	tttactattd	agaagacaag	aactattttt	taaatgtggt	3180
aaataatata	ttcttttaata	agaattataa	taatacattt	ttttatacat	gtcaaatata	3240
tatttttatca	aaaggtttat	attattttat	aaattattat	acattgttaa	tatctagtaa	3300
ttataaagct	gaagaaataa	agacggagca	caacaaatgt	aacatcaaca	ataataataa	3360
taataacaac	aataataata	acaacaataa	taataacaac	aataataata	acaataataa	3420
ttataacaat	aataattata	ataataataa	tgtgtatcct	ttataaaatc	tacacatgaa	3480
gtacatttgc	atgcatatga	aaatgatata	attggattta	attgtttaga	aactactcat	3540
ctaagtggg	ttgaggttga	agttgaagat	gctgaaatat	atcttcaacc	tgagaattgt	3600
tttaataatg	tatataaagg	attgaattct	gttgatatta	ctactatatt	aaaaaatgca	3660
taacatata	atataaataa	taagaaaaca	cctacctttt	taaaaattcc	accatataat	3720
tatttagaag	atgtcgaaat	tagttgccaa	tgactattta	aacaagttgt	taaaaaataa	3780
aaagttatta	taaccaaaaa	tgatacagta	ttattaaaaa	gagaagtgca	atctgagttc	3840
acattagatg	ataaaatata	taaatgtgaa	catgaaaatt	ttattaatcc	aagagtaaat	3900
aaacattttg	atgaaaatgt	agaatataca	tgtaatatata	aaatagagaa	tttctttaat	3960
atatttcaaa	tattttgtcc	agccaaagat	cttggtattt	ataaaaaat	acaaatgtat	4020
atgatattg	taaaaccaac	aagagtacca	caatttaaaa	aatttaataa	tgaagaatta	4080

cataaattaa	ttcctaattc	agaaatgtta	cataaaaacaa	aagaaatgtt	aatttttatat	4140
aatgaagaaa	aagtggatct	attacattttt	tatgtatttct	taccaatata	tataaaaagac	4200
atatatgaat	tcaatatagat	atgtgataat	tcaaaaacaa	tgtggaaaaa	tcaatttagga	4260
ggaaaagtta	tatatcatat	tactgtttca	aaaagagagc	agaaagttaa	aggttggttca	4320
tttgataatg	aacatgcaca	tatgttttagt	tataataaaa	ctaattgttaa	aaattgtatt	4380
atagatgcta	aacctaaaga	tttgataggt	ttcgtttgtc	cctctgggtac	cttaaaaatta	4440
acaaattgtt	ttaaagatgc	aatagtacat	acaaatttaa	caaataattaa	tggtatactt	4500
tatttataaaa	ataatttggc	taacttttaca	tataaacatc	aatttaatta	tatggaaaata	4560
ccagcttttaa	tggaataatga	tatatcattt	aaatgtatat	gtgttgattt	aaaaaaaata	4620
aaatataatg	tcaaatcacc	attaggacct	aaagttttac	gtgctcttta	taaaaaatta	4680
aatataaaaat	ttgataatta	tggtactggc	actgatcaaa	ataaatatct	tatgacatat	4740
atggattttac	atttatctca	taaacgtaat	tatttaaagg	aattatttca	tgatttaggt	4800
aaaaaaaaaac	cagcagatac	agatgctaac	cctgaatcta	ttatcgaatc	tttaagtatt	4860
aatgaatcta	atgaatctgg	acctttttcca	accggggatg	tagatgcaga	acatttaata	4920
ttagaaggat	atgatatactg	ggaaagttaa	tatgatgaac	aattagaaga	agttatatat	4980
aatgatattg	aatcttttaga	attaaaagat	attgaacaat	atgtttttaca	agttaatttta	5040
aaagctccaa	aattaatgat	gtctgtctcaa	attcataata	atagacatgt	atgtgatttc	5100
tcaaaaaata	atttaattgt	accagaatca	ttaaaaaaa	aagaagagct	tggtggtaat	5160
ccagtaaaaa	ttcattgtta	tgcattatta	aaaccttttag	atacattata	tgtaaaatgt	5220
cctacatcaa	aagataatta	tgaagctgct	aaagtaaaca	tatctgaaaa	cgacaatgaa	5280
tatgagtttac	aagtttatatc	attaatcgaa	aaaagatttc	ataattttga	gacgttagaa	5340
tcgaagaaac	ctggaaatgg	agatgtagta	gtacataatg	gtgttgtaga	tggtgacct	5400
gtattagata	acagtacatt	tgaaaaaatat	tttaaaaaata	taaaaataaa	accagataaa	5460
ttttttgaga	aagttataaa	tgaatatgat	gatactgaag	aagaaaaaga	tttagaaagt	5520
atattacctg	gggctattgt	tagtcctatg	aaagttttaa	aaaaaaaagga	tcctttttaca	5580
tcatatgctg	cttttggtgt	tccaccaatt	gttcccaaag	atttacattt	taaagtagaa	5640
tgtaataata	cagaatataa	agatgaaaa	caatatataa	gtggatataa	tggtataata	5700
catatttgata	tatcaaatag	taataggaaa	attaatggat	gtgatttctc	tacgaacaat	5760
agttctattt	taacatccag	tgtaaaaatta	gtaaatggag	aaactaaaaa	ttgtgaaata	5820
aatataaata	ataatgaagt	atttggtatc	atgtgtgata	atgaaacaaa	tttagatcca	5880
gaaaaatgtt	ttcatgaaat	atatagtaaa	gataataaaa	ctgtasaaaa	atttcgtgaa	5940
gttataccta	atatagatat	attctcatta	cataattcta	ataagaaaaa	agttgcatat	6000
gctaaagtac	cttttagatta	tattaataaa	tattattttt	cttggtcatg	taaaacatca	6060
catactaata	caataggtag	catgaaagtt	actctaataa	aagatgaaaa	agaagtagaa	6120
gatttttaaaa	cagctcaagg	tattaaacat	aataatgtac	atttatgtaa	tttctttgat	6180
aatcctgaat	taacatttga	taataataaa	atagttttat	gtaaaaatcga	tgacagaactg	6240
ttctcagaag	taattatata	attaccaata	tttggaacaa	agaatgtaga	agaaggagta	6300
caaaatgaag	aatataaaaa	attttcatta	aaacctcat	tagtttttga	tgataacaat	6360
aatgatatta	aagttatagg	aaaagaaaaa	aatgaagat	ctattagttt	agctttgaaa	6420
gggggtttatg	gaaatcgaat	ttttactttt	gataaaaaatg	gaaaaaaaagg	agaaggaaat	6480
agttttttta	tacctccaat	aaaacaagat	acagatttaa	aattttataat	taatgaaaca	6540
atagataatt	caaataattaa	acaaagagga	ttaatatata	tttttgtag	gaaaaatgta	6600
tcagaaaatt	catttaaatt	atgtgatttc	acaacaggtt	cgacttcatt	aatggaatta	6660
aatagtcagg	taaaagaaaa	aaagtgcact	gttaaaaatta	aaaaaggaga	tatttttgga	6720
ttgaaatgtc	ctaaagggtt	tgctatatatt	ccacaagcat	gttttagtaa	tgttttatta	6780
gaatattata	aaagtgatta	tgaagatagt	gaacatatta	attattatat	tcataaagat	6840
aaaaaatata	atttaaaacc	taaagatgtt	attgaattaa	tggtatgaaa	tttttagagaa	6900
ttacaaaata	tacaacaata	tacaggaata	tcaaatatta	cagatgtgtt	acatttcaaa	6960
aatttttaatt	taggtaattct	accattaaat	tttaaaaatc	attattctac	agcatatgct	7020
aaagtaccag	atacctttta	ttctattatt	aacttctcat	gtaattgtta	taatccagaa	7080
aaacatgtat	atggtactat	gcaagttgag	tctgataatc	gaaattttga	taatattaaa	7140
aaaaatgaaa	atgttatata	aaatttcctt	ttacctataa	tagaaaaata	tgactacta	7200
ttagatgatg	aagaaagaca	aaaaaaaata	aaacaacaac	aagaagaaga	acaagaagaa	7260
caaataattaa	aagatcaaga	tgatagatta	agcagacatg	atgattataa	taaaaatcat	7320
acatatatac	tatatgattc	aatgaacat	atatgtgatt	atgaaaaaaa	tgaatcactc	7380
atatcaacat	tacctaataga	tacaaaaaaa	atacaaaaaa	gtatctgtaa	aattaatgca	7440
aaagcattag	atgttggttac	aattaaatgt	cctcatacaa	aaaattttac	gcctaaagat	7500
tatttttccta	attcttcatt	aataactaat	gataaaaaaa	ttgtgattac	ttttgataag	7560
aaaaattttg	ttacttatat	agatcctaca	aaaaaaacat	tttctttgaa	agatatatat	7620
atacaaaagt	tttatgggtg	ttctcttgat	catcttaatc	aaataaaaaa	aatacatgaa	7680
gaatgggatg	atgtacattt	attttatcct	cctcataatg	tattacataa	tggtgtactt	7740
aataatcata	tagtcaactt	atcatctgca	ttagaaggag	tcttatttat	gaaatcaaaa	7800
gttactggag	atgaaacagc	tacaaaaaaa	aacactacac	taccaactga	tggtgtatca	7860
agtatttttaa	ttccaccata	tgtaaaggaa	gatataacat	ttcatctttt	ttgtgggaaa	7920
tctacaacaa	aaaaaccaaa	caaaaagaac	acatctcttg	cacttattca	tatacatata	7980
tcatcaaaaca	gaaatattat	tcatggatgt	gatttcttat	atttagaaaa	tcaaacaaat	8040
gatgctatta	gtaataataa	taataattca	tattctatat	ttacacataa	taaaaatata	8100
gagaataatc	taatatgtga	tatatcttta	attccaaaaa	ctgttatagg	aattaaatgt	8160
cctaataaaa	aattaaatcc	acaaacatgt	tttgatgaag	tgtattatgt	taaacaagaa	8220
gatgtacctt	cgaaaactat	aacagctgat	aaatataata	catttagtaa	agacaaaata	8280

ggaaatatat	taaaaaatgc	aattctctatt	aataatccag	atgaaaagga	taataacatat	8340
acttatttta	tattaccaga	aaaattttgaa	gaagaatttaa	tcgataccaa	aaaagtttta	8400
gcttgtagat	gtgataataa	atatataata	catatgaaaa	tagaaaaaag	tacaatggat	8460
aaaataaaaa	tagatgaaaa	aaaaacaatt	ggtaaagata	tatgtaaata	tgatgttact	8520
actaaagttg	ctacttgtga	aattattgat	acaattgatt	cgtctgtatt	aaaagaacat	8580
catacagtac	attattctat	tacattatca	agatgggata	aacttattat	taaatatcca	8640
acaaatgaga	aaacacattt	cgaaaatttt	tttgttaatc	cttttaattt	aaaagataaa	8700
gttttatata	attataataa	accaataaat	atagaacata	tcttaccagg	agccattaca	8760
acagataata	atgataccag	aacaaaaatt	aaacaatata	tattaagaat	tccaccatat	8820
gtacataaag	atatacattt	ctcattagaa	tttaacaata	gcctaagttt	aacaaaacaa	8880
aatcaaaata	ttattttatg	aaatgtagcc	aaaattttta	ttcatataaa	tcaaggatat	8940
aaagaaattc	atggatgtga	tttcacagga	aaatatcccc	atttattttac	atattcaaaa	9000
aaacctttac	caaattgatg	tgatatatgt	aatgtaacta	taggtaataa	tacattctca	9060
ggttttgcac	gcttaagcca	ttttgaatta	aaaccaaata	actgcttctc	atctgtttat	9120
gattataatg	aagccaataa	agttaaaaaa	ttattcgatc	tatccacaaa	agtagaatta	9180
gaccataatg	aacaaaaatac	ttcaggatat	acactatcat	atattatttt	taataagaaa	9240
tccacaaaac	ttaaattctc	atgtacatgc	tcattccaact	attcaaatta	tactatacga	9300
atcacatttg	atcctaatta	tataatccca	gaacctcaat	caagagccat	cattaaatat	9360
gtagatctgc	aagataaaaa	ttttgcaaaa	tacttgagaa	agcttttaa		9408

&lt;210&gt; 291

&lt;211&gt; 2040

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 291

atgagtgatg	atgatgataa	gatatatata	tattctgatt	tgttctcaaa	aaatttttagt	60
gatgatgaga	aagatgattc	atagtgaaga	gaaaaacaag	tgtatagtgg	tagtgaaaca	120
caaaacgcgg	aaaacgaata	ttctaaactc	cgagcacaaa	attctactat	attaataaat	180
tatttttgata	atgataatat	aaaaaatgta	gaaaatctta	aatctaataa	tcctgatcaa	240
attgatctca	tattattttcc	tgtaaaataaa	aattattata	tgaattttat	tgatggacaa	300
ttaattgaaa	atatacatcc	cataaaaacta	agaaaagctg	gatttttatgc	tatctatgtg	360
gaaaataata	acaatagtaa	atgggatggg	atctactttg	gcttggtccag	aatgcagggtg	420
gagtttagatt	acaagcttat	aacaaaaaag	aataaggatg	gtggcgaaata	tgaaaagaga	480
aacacttcaa	gttatgataa	tacagaaagt	gtacaaaaca	ctgtaggtag	tgaaaaagaa	540
gaaactgaaa	ataagaatga	agaaacaagt	aattataatt	cgaattttaa	taatgaaata	600
aataaaatat	gtaaatataa	tttagatcaa	actgatatat	tactagatga	tagtaattct	660
gagagaagaa	gaaatagtaa	attttaaata	aaaaatacta	attattatga	taatttaattg	720
ttgcaaaata	aatatatgaa	ttctatatta	tatgatgatg	atgatgataa	aaataatata	780
gaaacgtata	catgtacgtt	caaaacagaa	gatcaaatata	gagttccatc	ccaaaaaaaa	840
aagtacatat	attttatata	taaatatgat	aatgcaacac	tagattttaa	tgtgcataca	900
tatatgtctt	taggcatgag	tatcttatgt	aaatatccgt	tgctttattg	tggaaggtat	960
aatcatatcc	ccagggaccc	ctacacaccc	tttaaaaaaac	cagtttccat	tttgctcgctg	1020
gacggagggg	gcatattgac	catatcaaca	ttacttggtt	taaacagatt	agaagcggag	1080
ctacgaaaag	aaataggaag	tgacgacata	aaattaatag	attgttttga	tatggtatgc	1140
ggtacaagcg	ccggtgggtt	aataagtcta	gctttattaa	gagagatcga	tttacaggat	1200
gttagtaata	tgtggccaag	tactataaaa	aagggtttttg	aaggaaatcg	aaatataata	1260
agtgggtatat	tttttgaagg	atagtatgta	aataatgtga	aagatgtatt	tttggaacgt	1320
atgggaaata	aatttatgtc	ttcatataaa	aaattttatt	gttttgtaac	agcaactgat	1380
gtaaaacata	agccatataa	attatttttta	attagaaatt	atacgcataa	atataattca	1440
attaatgctg	aatcatatga	tggtattaat	aaagttcctt	tatggctagc	tgcatgggca	1500
actgcttctg	caccaacata	tttaaaagga	cgaatggccg	aagatattaa	aaagttggga	1560
attaatatata	aaccagaaat	acatttagta	gatgggtgctt	taaaagcaag	taatccagct	1620
ttgattgctt	tagaagaatg	tgcaagatta	aacaataaaa	atztatctac	atttattaaa	1680
gaggatttag	atacattagt	atctataggg	acgggtcagg	tgccactact	attaacacaa	1740
tctgggtgcaa	gtagtaaatc	agcttcaacc	tttgaaatat	taattaattc	tactcactta	1800
ttaacaagag	caaattgacac	tcatagggaa	gtattacaac	gtttagctga	ccgagaaaaa	1860
acatatttta	gattttaatgt	tccacatata	ggtgatatag	aaatagatag	tcaggatgtg	1920
cgtgattttg	atttaatatc	taaggcaact	caagattatt	tatttgatga	aaaattttat	1980
gaaattaaaa	ggtttagctca	caagttagca	aataattaca	tacgttcaaa	atatctataa	2040

&lt;210&gt; 292

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 292

atgtatatat	gttttttttt	tttttttttt	ttcttagtta	tcaaattagg	agaagatgaa	60
------------	------------	------------	------------	------------	------------	----

aacttttggtt	cttcatgttt	ctattcatta	gggaatacaa	aaatattaac	tactgtatat	120
ggtcctaatac	cagattcaaa	atacgcaact	tatagtaagg	gaaaagtttt	tttagacgtc	180
aaaagtttga	atatcaacac	tataggagct	agcgataggg	tattatatat	atatggattt	240
tttttttttt	tttttttttt	tttttttttt	atcctgaacc	gttcatattt	tttttttggtt	300
ttgttcataa	tatttatata	g				321

&lt;210&gt; 293

&lt;211&gt; 723

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 293

atgttttttaa	aaggatacac	ctcaaatgtg	gtactaatta	tattaacatt	tttcattcta	60
ctaacaaaag	aagaaaaaaa	tataaaaaat	aatatctctg	gatattgttt	tttgaatttt	120
ggattaaaaa	aaaatgcaat	aataaaaaaa	agagaaaaac	aaaatttgaa	attattttgt	180
tataatggta	taagaatagg	tcaaggttat	gatatccaca	aaataaaaag	tttagatgaa	240
gaatataata	catatgcaaa	taatgatttt	aataaaaaatg	aacaatcttt	taaaacctta	300
accttaggag	gagttaaaat	aaataatggt	ttagttttat	cacatagtg	tggtgatata	360
atataatcatt	cgatagtga	ttcaattttt	ggtgccttag	gttctttaga	cataggaacc	420
ttatttctctg	ataaagatga	aaaaaataaa	aataaaaaact	cggctatatt	cttaagatat	480
gctagacttt	taatatataa	aaaaaattat	gatattggga	acgtggatat	taatgtaata	540
gcacaagttc	ccaaaataag	caacatcaga	aaaaatatta	taaaaaatat	atcgacagtg	600
ttaaatattg	acgagtcgca	aatatctggt	aaaggaaaaa	ctcatgagaa	attaggagta	660
attggtgaga	aaaaagcaat	agaatgcttt	gcgaatattt	tgtaataacc	taaaaattca	720
ttaa						723

&lt;210&gt; 294

&lt;211&gt; 822

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 294

atggaagatc	aaaatgcgga	atatacaaa	aaaaacaaca	tttctgataa	attagaaaaga	60
ttaagagaat	tggtttataa	tgacagataa	aatacacatg	aaatggtgaa	atgtaatgta	120
gatgaaaaaa	tttgacattt	tttctgtgca	tatcatatta	ataaggatat	gaaaattact	180
gaaagtctct	ggttatttta	tgaatattat	ttttatagat	atctttgttg	tgcatatgat	240
tttgaaaaaa	cgaattacga	tttttttcaa	tatgaaaaac	aagattctat	aaactgtaat	300
aagggtataa	tagaaaaata	atgtacatgt	gcaaaaaacat	taattgaatt	atatgataaa	360
aatccacaaa	agaaaatttt	ttccgttttt	ttttattatg	ctttatgggc	aaaccaattt	420
gatcttagtt	ggaatccaac	gaaaaataaa	agtgaacaac	ataatgttca	ggaaaaagac	480
ataaggaaaa	aaacattaag	agaaaaacaa	ttttgttttg	atacagatga	tattgataag	540
ttatacaata	gtttttatat	ggaaaaacatt	ttatgtaacg	atataaatga	tatttataag	600
gatatgactg	tacagaaaca	taaaagattt	gatatcggtg	tggacaacat	gggagttgaa	660
tttataacag	atttttgtct	tttatacttt	ttgacacatt	actttgagga	gataaccatc	720
catgtgaaga	agtttccctt	atttgtgtct	gatacgatga	taaaggatat	tcattatact	780
ttaaatgttt	tgtgtaatga	tgaaaaggta	aaaaataaat	aa		822

&lt;210&gt; 295

&lt;211&gt; 1515

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 295

atgaatgtga	gtgttactat	aaaagggaat	ttgtctaatt	ccagtaccga	aaagaataag	60
aattcttcaa	aaaaaaacga	cgcatctgtt	tttttttaaa	ttaagaaaaga	gaattttggat	120
aaaaaaatta	taaaaaataa	tatcgtgcga	aaagaaaaga	acagttttaa	taaaaaaggc	180
acaagtaaca	atacaacaaa	ttctttttca	aaaggaaaata	acataaaagct	atctggagat	240
actcatgcac	gaaacgttat	aaatgagaag	aaaattttat	ccgaaaagaa	aaatggcctt	300
acaaccaaat	atgattctaa	gaaatcatat	tcaagtaaaa	aatctagcct	tttaaacaaa	360
ttgccatcta	gcgaaattac	attaaataat	agtaacttga	aattttttga	aaaaaaaaaa	420
agtaaggaca	aacaaaatgt	aattaataat	ataaatggta	gtaagttgat	aaataatgta	480
gataaattat	atacaataaa	tgataatatt	aataataata	taaatgagaa	aaagagttcc	540
aacatattta	caaaaaatat	tcagaaaaaa	aacaaaaacaa	attcttcaaa	caattttaa	600
acatctaacg	taaataaaaa	aacttataag	ttaggaaatg	tattagcaca	acctgaaaaa	660
ctcataagaa	agaaaaaaaa	taaaattatc	aaaaatttaa	attcattaaa	aagaaatata	720
pacattatga	tgaaaagtga	acaagatcaa	aatatattgg	aggaacatat	gtcatctgta	780
iccatcatcaa	atgaaaaaca	aaaaaataaa	aataataata	tagaacaana	tgaaaatatg	840

acaaaattag	aaaaaaatgg	agatgataat	atztatatga	aagacaataa	aaaaaatgat	900
gaacaaaaag	gagataataa	taccaaagag	caaatacata	taaatgatga	tgatgaaaag	960
aaaacattcc	atgacaaaaa	agatgatatg	gaaaataata	cacaagaaac	aaaaacaaat	1020
atatttcaag	ataatgctgt	tgatacaata	aatgggcata	tttgtaagga	tgaaaaaatg	1080
ttatttccat	atztatataga	agcaacttat	gataaaaaata	cagatatttt	taatgaaaaa	1140
tatgatgatg	atgataataa	taaagagaca	aataatztat	tattacctgg	ttatcataat	1200
gtcacatttg	aaaatgttag	tgaaaaataac	aaaatgtata	atattaataa	taataataaa	1260
aataataata	atccaatatc	aaataatata	tatgcaacta	atagttcatt	cccaccttat	1320
aaatttatat	cttattttaag	accaaagtta	acaccaaag	cttatcattt	aaaaaacaat	1380
gaaatcttaa	ataatttttt	gtttacatct	tctgatataa	cacgtggtac	tatatatcaa	1440
caatataata	tgacagttac	ttatccatat	ggagttcctt	atattaatat	gaaaaacaaa	1500
atcaccaaaa	agtaa					1515

&lt;210&gt; 296

&lt;211&gt; 3417

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 296

atggtagtgc	ataataaaaa	tatagccacc	cataaatttc	cgtcccataa	aaaatataaa	60
aaaataatgt	cacaaaagtt	aagatcgagc	gtcactcgca	cgagtaacga	agaatctaata	120
gaagacgata	agaactgtgt	gaatgtaaat	tctgtaagaat	tctctgttaa	aaaaattcgg	180
tccatattat	atgaggagtc	tataaatttt	agtgtataaa	atacatacta	caaaagtagt	240
aatatccata	attataataa	catagacacg	tatatggatt	atataaaaaa	atctaattat	300
gctagaagct	atgaacaaga	aaatatatat	aacgaagctt	taaatztat	taataataga	360
aatgtgtata	taaaaaaaaa	atatcgtaat	gattcatatt	ataacattaa	aagagacctg	420
aaacgaggac	attacttttg	tgacgatgct	gagtatatgg	attacatgga	taatgaaagt	480
atagactata	ataatatgaa	tgatcaatat	aaagatggta	atcatataga	tgatcaatat	540
aaagatggta	atcatataga	tgaaaaacat	aaagatggta	atcgtataga	tgatcaatat	600
aaagatggta	atcgtataga	tgataaaatt	gttaagagtg	aacatatttg	taatgaaaag	660
aaaacaaagg	gggtgaatgg	aaaatcaaaa	tattatatac	atgacatgaa	cagaaaagat	720
aaacaaaaaa	aaaataaaca	taataatata	aattataata	ataatgatga	taatgtaaat	780
aattcatgtg	aatataattt	ttccaaggag	aattcccaaa	atatgtgcca	ttatgaaaat	840
aaaatatacg	ataaatatgg	cgagtttgat	accttcgtag	aaaaattttg	tgatgatata	900
aatattgata	attgtaattt	gagacatggt	aaatatacac	aagcttttga	tgaaaaaaga	960
aaaaaagaac	agaatattat	atztatataa	aaatataaag	aactgttttg	aaaaaataag	1020
cttaatttaa	aaaatggtaa	tgatataaat	aataggaaaa	aatcattaag	gtgtatgaat	1080
gaaggaacaa	ataatatatt	caaaggtaat	gatgatgaaa	tatataataa	taattataat	1140
aatagagatt	tacttacaga	tattaaagaa	ttaaatagta	tgagtgaatc	taatggttat	1200
aatgaaaaag	aagaaaattt	ccttgaacaa	ttaataaagt	taagatatatac	acctgatcaa	1260
attacacaac	taagtgtatt	atttgaaaat	cctaaaaactt	taaaaacagt	aaatgttaaa	1320
atattaaatt	ggttaaattg	tcaattaaat	aatggttatt	ggttagaaag	attttcttta	1380
tttctattag	gattaactat	agctatagga	gtaggaaata	ttgaaaccat	atgggtttcta	1440
atgtctacat	ggcatgggtg	tatatattat	gtaccatata	ttttatgtta	tttttttggt	1500
tgtcatccta	ttttaacatt	tgaattatat	attggacaac	tagtcagaac	atcaacacca	1560
tttatattct	atagattatt	aaaaccatgt	gcatctgtag	gattccttaat	ggatttagca	1620
tgccctatga	atagctatat	caatagctat	agaaccgcat	ctgaatattt	tatctattta	1680
ataaatagct	ttaaaaaaga	tcttccttgg	aaattaagta	aagaagaaat	aaaattctgt	1740
actgatttca	aaaatgattt	tgttcactgt	catagtcata	gacctttatg	cttattttct	1800
aaacaattat	ctacatgcgt	acctaatagc	ataggaaaaag	ctttcttaat	atatcataag	1860
aaatttttcc	caaataataa	tctttataat	ttcttattaa	atattagtga	tcataaaaaat	1920
tatattaata	ttttttcaaa	cggagactcc	taatttgata	aagacactct	tatatcttct	1980
ttcatatgta	atttcctagt	aaccagcttt	caacttttcg	gattaaccaaa	ctttgcttct	2040
tcagcagctc	ttgtcctttt	attaatagga	tttctatcta	taacacaatt	tgctaccatg	2100
tttaacttga	atagtgcttc	acaggcttat	tcacacgtct	taaaatcctg	gaattttctca	2160
tacttgtata	cttattcgct	catatgggtc	cagtgtgtat	catttgctct	ttatgagctc	2220
tccataggta	tggggaatata	ttcttcctta	gccacaaaaa	cgagaatcgg	aactaaccta	2280
gcttttgatg	gatatgctat	cactacgtgg	aattccatca	tatcgtctct	tatgtttttc	2340
tcagctattg	ccgttatttg	tttcatatca	aaaagcttga	attccaattt	tgttgatatt	2400
ttagaatttt	caagaagtga	ctgttcattt	attctttttc	cagttggctt	cacatattta	2460
aaaaaaatgg	agaaaaacgtt	gtgcatgctt	tattatgggt	cttatgccgt	tttgtcatgc	2520
gcttccctag	ccatacaatg	tgaagttata	gttatgacca	taaaagattt	taaattttgc	2580
aaaaatatta	aaaagaggaa	tatcatatta	ttattgtcta	ttttattttt	tatttcttct	2640
ttttttatat	caaattcggg	ttctaagcat	attatatggg	ttttaaattt	tactatatca	2700
gaaaaatggta	gagtatttgt	atctcttctt	atttgataaa	tattaggctg	gttttacaac	2760
accgaatatc	aatttaaaaa	tttaactact	aaaagtgtgc	tatttttcaa	tataacctat	2820
tgggtattaa	acataatggg	cagtataaca	ttcaattatt	taacgtacca	tgtatatgta	2880
ttatatattat	gtagaatact	catatttttg	ataagtacaa	tctttgcatt	gctagcttta	2940
aaagcagaag	tatatttaaa	taaaggagaa	ctagaaattt	tttataatag	aactacatat	3000



aaggtaaagt	atattcaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaacaga	gcttattcct	3060
gggagaatag	caattcatat	aattcctaca	catatatata	tctatatata	tatgtataat	3120
tttttttctt	tattttttta	tttagaatat	attatatgta	ctatatattg	gaaatataga	3180
aaccttaaga	aaagaactac	agagaattat	cagtggaaat	gttttcatag	gaaatatttc	3240
tatagtctga	cttttgaaaa	gtattgtgcc	tatgatgacc	atttcgtgga	cttttctata	3300
ctcccttcca	agcctttaa	agaagtacaa	aattttaata	ttctatctta	tttttatgaa	3360
tttaaaaata	tcagaaagag	gagaaaaaag	aagactaaaa	aaattagggt	tgattga	3417

&lt;210&gt; 297

&lt;211&gt; 1707

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 297

atgaagtttg	gtaagaacat	cagaagagag	atgcataacc	actcgggtat	gcattatata	60
aattataaag	ttttaaaaaa	attaataaaa	tatattaata	atagtattac	tgaaaaggag	120
ttagagaatg	ggattgaatt	aaataaaaaga	tttgagaag	ttctattaca	tgattttaat	180
ataatagaag	agacatttgt	aaagttattt	aaagagatta	tgaatataaa	aaaagagatt	240
gaaaagaatt	atagtacagt	agaaatagtt	gataataatg	acagtatgaa	gatttctaaa	300
gaatgtatat	cctttgatac	tttattaaat	atattaaaag	aagaaaatgt	ttcaaaagaa	360
ttttttaatt	tttgtgttca	attaagtata	ctttctaata	aatgtaaaat	tataagaaca	420
tatgttatat	ataattatat	aggattaata	aaaatattaa	aaaaaaaaaa	taaacattgt	480
ggtaatatat	ttagaaatat	acaaataact	gatatcttgt	cacgttatac	ttggtgcctg	540
tcagatgaat	taccaaatt	aatttcttca	gttaatatta	tctcggatga	gtttatgcaa	600
aaatatacga	atacaaattgt	aactattgaa	aaatatatat	gccccatttg	tttatcttta	660
atacatgaac	cggttacttt	aaattcatgc	tttcatctct	tctgttgga	atgcttagct	720
acagctattc	agaaatatct	tatagataat	tgctccatct	gtagaactaa	aattgtttat	780
gataaaaaatt	cttttaaaat	agatggaatt	ttaaaccaat	tcttggaata	gcattttctg	840
agttcacatg	ataaagaaaa	aaatcgcccc	tttaaaggag	gtcaccaaaa	aggagaaaat	900
gggatgcaaa	caatggacac	ggaagcggtc	aagagggaaa	atataaagag	gtacaatggt	960
gggggggaaa	acatcgacag	gtacaatggt	gggggggaaa	acatcgacag	gtacaatggt	1020
gggggggaaa	acatcgacag	gtacaatatt	gagggggaaa	acatcgacag	gtacaatggt	1080
gagggggaaa	acatcgacag	gtacaatatt	gagggggaaa	acatcgacag	gtacaatggt	1140
gagaagaacc	atcttataaa	gaagacaaat	aagaacataa	atattagtaa	caataataaa	1200
atatcattta	attattcaaa	aatattatgt	ttatcaaate	aagtgtttga	aaataataag	1260
aacaaattgt	ttatgaacca	taatatattt	aatataaaag	acgaggaaaa	acaaaaggta	1320
cgaggatcaa	cttatacagg	ttctatttta	tctcatcag	attcttcaaa	tagcaatcaa	1380
aataattata	taaattttat	gtataacaaa	aaaggaaagg	atattatagt	tcctatgaca	1440
aaaatgagta	gtagggttgag	agagtatgaa	atactagatg	atgaatatgt	ggataacatt	1500
gaatgtttta	ataagtatgt	gtctgtatta	aatacgaatg	atgtaaatat	tatggatgat	1560
agagaaagag	agtgtagtga	ttatagtgtg	gaattttgta	atgaagtatc	aaaggataaa	1620
ataaataata	atgagaataa	taaaatgagg	caagaaaata	attataataa	tataataaat	1680
gacgttttga	gttatacgtt	taatttaa				1707

&lt;210&gt; 298

&lt;211&gt; 1374

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 298

atggcttcaa	tggtatcataa	tgctcaagat	gaattagtag	attatgaaga	tgatgagaat	60
atattagata	gtaaagatgt	taaagggaat	ttaggaaata	atatttttaa	taataataat	120
aagggtggag	ctatgagagg	tagttatgca	actgtgcata	caggaggatt	taaagatttt	180
tttttaaaac	cagaattatt	aagagcaata	agtgaagtg	gttttgagca	tccttcagag	240
gtacagcaag	aaactattcc	cgcagcaatt	acaggaactg	atattccttg	tcaggccaag	300
agtggtatgg	gaaaaacagc	cgtttttgtt	ttatccattt	tacaacagct	agatacgaat	360
gaaaatcaag	atatgcagga	cacgaaagaa	atgaataatg	acaacaataa	taatggagac	420
aataaaattg	ttaggtgtct	tggttttagca	catactcgag	agttggccta	tcaataaaag	480
aatgaattcg	ataggtttag	taaatattta	aaaaatgtaa	gatgtgaagt	tgtatatgga	540
ggtatatcaa	tgaataagca	tataaaatta	tttaaagaag	ataatattcc	acatattatt	600
ataggaacac	caggaagaat	attagccttg	ataagagaga	agtattttaa	tacagataaa	660
attcaacatt	ttgtattaga	tgaatgtgat	aaatgtttag	aaaaattaga	tatgagaagt	720
gatgttcaga	aaatttttat	atcaacacct	ttaaaaaaac	aagttatggt	tttttcagca	780
actatggcta	aagaaatgag	agatgtgtgt	aaaaagtttt	tacaaaatcc	agtggaatt	840
tttattgatg	atgaagcaaa	attaaaatta	cacggattat	tacaacatta	tgtaaatta	900
caagaaaaag	ataaaacaag	gaaacttatc	gaaatattag	atgctttaga	attcaaccaa	960
gttattatct	ttgttaaatt	agttacaaga	gctatcacat	tagataaatt	attaacagaa	1020
tgtaatttcc	catccatagc	tatccatgga	ggtcttgaac	aacaagaaag	aatagaaaga	1080

tatgataaat	ttaaaaaatt	cgaaaataga	atcctagtagt	caacagatct	attcgggaaga	1140
ggtatcgata	ttgaaagagt	taatatgtgt	atcaattatg	atatgccaga	aaattcagac	1200
tcttattttac	atagagtagg	acgtgctgga	agatttggtg	ccaaaggtct	agccgttact	1260
tttgtttctt	cacaagaaga	tactttggca	ttgaatgaag	tccaaacaag	atttgaagtt	1320
gccatctcag	aaatgccaaa	taaaattgat	tgtaatgagt	acatcaatca	ataa	1374

&lt;210&gt; 299

&lt;211&gt; 246

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 299

atgaatgtta	aaattccaga	atttttaact	gatgaaaatc	acccagtagg	ttattgtgtt	60
aatggtatac	aaacttttgt	tgaggatagc	gtaaggctaa	taaggaaatg	taccaagccc	120
aataaaaaag	aatatacaaa	catagtatat	gcttgctctt	tcgggttttt	gattatggga	180
tttattggat	atataataaa	gcttgatatt	attcctataa	ataacatttt	tggtggatct	240
tattaa						246

&lt;210&gt; 300

&lt;211&gt; 291

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 300

atgtcaagaa	gaactaaaaa	ggtcgggtta	acaggaaaat	atggtaccag	atacggatca	60
tcattacgta	aacagataaa	aaaaattgaa	ttaatgcaac	atgccaaagta	tttatgtacc	120
ttctgtggaa	agactgccac	aaaaagaact	tgtgtaggaa	tatggaaatg	taaaaaatgt	180
aaaagaaaag	tttgtggagg	tgcttgaggt	ttaaccaccc	cagctgctgt	tgctgctaaa	240
tcaacgatta	ttagattaag	aaaacaaaaa	gaagaagccc	aaaaatctta	a	291

&lt;210&gt; 301

&lt;211&gt; 7722

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 301

atgagtttta	aaaataatga	gaaatatatg	gatgaagaaa	atgaccagga	gagcgatgat	60
gaattcttta	aagtaaaaag	gaagcctcaa	attaatgttg	atgctgaaga	agatgaagat	120
aataacaata	ataataataa	taataataat	aatagtaata	ttagtaacca	tatgaatgag	180
tttgatttag	agaagagga	tgaagatgat	tatgaggatg	agaattatat	tgtaggggaa	240
actatagaaa	ttgatgaatc	taaattaaaa	aatgaaaaaa	tcgaagaaga	tatatttaac	300
gagaataatt	tattacatgg	aataaaaaa	agagaattat	tagaacaaga	aatattaata	360
cttttttagta	atatgctaaa	aaaagaaaca	atattatgta	aagtggtagt	420	
aatgatccta	tggaatgaa	aagtttggtt	aaagatgata	tggttgatga	taaagaatta	480
aaagattttg	aaaagtcaag	tttaaaaaa	aagaataaag	aagtatataa	ttttatatat	540
aataaaatga	atttacatat	taaagagaat	aagaaaaagg	atgaaaagga	gaaaaagaat	600
aaaatacata	ataatgatga	aaataataat	atgatataat	ataagaatat	agataaaaact	660
cattatatat	tagataataa	tggtgtacat	atattaaatg	atattaatac	ctatttataa	720
agagaaaagag	atttatatgaa	tagaaaaatt	ggaacatata	tagattcaac	atataaaaaa	780
cctatgtatg	taacattata	tatatattaat	aatgatataa	taaaagatat	tattattacaa	840
gtaatatagata	ttattagaaa	tgattttgat	catgctatat	ataaagatat	tgatgaaaat	900
caattaataa	aaaattta	tatttttaata	aatcatttga	ctacacgacc	gagtaaaagaa	960
tggttttgatt	attggaaaag	acatatgcct	acatttaatg	ataagaaaag	tgaatataat	1020
gtatataaat	atttacaatt	acaaaaaagc	gatagaagaa	tattatatga	taccttaaaa	1080
aatgatatact	atattaaaga	attacaaaaa	agatcggata	tattagatca	atatcaaaaa	1140
ggattacaaa	gtttaaaatg	tttactagct	aataaaaaact	tcttaactat	gctaaaatgaa	1200
ttcagatata	ataccagtt	atttattgat	gctgactatc	gagaaattga	agaaaaatgaa	1260
aaggttatgg	aaatgcaaag	gagggaaaaa	gaattactgg	aggaaaaaaa	aagactaaag	1320
caagaattag	aatcttacca	cgacgattct	tcaacggatg	atgactctag	tgccgatgag	1380
caacaggatg	aacggaggga	ggttcttaca	cataatgacc	ctataaataa	aaaggatgac	1440
cctataaata	aaaatgatga	ccctataaat	aaaaatgatg	accctataaa	taaaaaatgat	1500
gacaataata	ataaaaaatga	tgacaataata	aataaaaaatg	atgacaatat	atgtaaatg	1560
aatgaccata	cacataatag	taatgaccat	acacataata	gtaatgacca	tacacataat	1620
agtaatgacc	atacacataa	tagtaatgac	catacacatt	ttagtaatga	ccatacacat	1680
tttagtaatg	accatacaca	ttttagtaat	gaccatacac	atttttagtaa	tgaccataca	1740
cataatagta	atgaccatac	acataatagt	aagaaccatg	cacatttttag	taatgaggta	1800
qacaaaaaaa	atgattataa	ataccattca	gaaaagaaaa	agaaaaataa	tgtgataagg	1860



agtaaaatgt	acaatataaa	gaaacgaata	agtaagatta	atgacgagct	ccatgagtta	1920
tcgaattttt	ttttaataga	taaaacccaa	agagagaaat	taatgtttga	atataacgag	1980
aatgtatttc	tgggttcgaa	tatattaaca	caagtttttag	gcatacagaa	taaaacagat	2040
aatcgagata	ttaatTTaaa	caacgttcac	tatgtctatat	tacaaaatat	actagataaaa	2100
catgggtgtc	ttcattttaa	aattgatgaa	atgagagatt	tatttgaaaa	agagataaaa	2160
aaatatgaag	aagaatcaaa	tatatatata	ccatatatta	aacaaaatac	tatgaagcaa	2220
atatgggaat	acataagatt	atTTttataat	atttatatgtt	atatagatcc	gatagatttg	2280
gtcaaatacat	taacatatca	aaaaagtaca	cacataataa	aaaaggaaaa	aaagaaaacc	2340
aaaacggata	tggataataa	taataataat	aataataata	ataataatga	taataataat	2400
ataatgatga	atcaaaaatt	tttgaataat	tatcataata	aaaaacatct	caatacttct	2460
gacaatgtaa	acaatatgaa	gacaaataat	ttacgaaatt	ataataaaga	tataaattta	2520
aaaaatgtag	gaaaagatat	gaacaaacgg	aaaagcatgg	cacaacagca	aaataaaaagg	2580
aaaagcaatt	atataaatat	aaaacaaaaa	aattttaatga	tcacacattt	gtcaaggatc	2640
aatcctttat	tagctaaatc	taaagtaagg	aaacccaatg	aagaaaagca	tttaaaaaaa	2700
agaaaaagga	aatttataga	aagaaaaaat	ttaatagatc	attatgaaat	atTTtctttt	2760
gaggattttt	cttttaatat	gttttctgaa	gatcgtttat	ttataaaata	taatatatta	2820
gatatatttg	atttatagtaa	cttgtataaa	atacaagatt	ttttaaataa	tattataggt	2880
ataaatgaag	aatttgaaag	tatctatgag	aatgatgata	atTTtccatta	ttcattaaag	2940
gtatttttaa	atatatgtat	aaaagattta	agaagatgta	taaatgaatt	ttataatttt	3000
caatgggata	taaaaatcat	attaaatatg	catgcatgga	ttgtaacata	ttataccaat	3060
ttatatatat	acgaaaatag	aaaaagggtt	tataattcta	gaaacaaaaa	caaaaataat	3120
aagggaacatc	aaatgaatag	agatgatgaa	aggaaatgta	caaaagaata	tacaaatcaa	3180
aatgaagggtg	aaatgaaata	tgatcataat	aggaagaggg	aagatgaaca	aaaaaatcat	3240
aaatatttgta	atataaattg	taatataaat	tgtaatatata	attgtaataa	aaattgtaat	3300
aaaaattgta	atataaatta	taataatggt	gataataatg	tgtatgataa	caatgtgtat	3360
gataataatg	atgattataa	tgatgattat	aatgatgatt	ataatgatga	ttataatgat	3420
gattataatg	atgtaaatca	aaatacctat	gttaaacata	acaatcaaaa	tgaaaattca	3480
tcattatttta	tttctagaat	tcaaatgggt	ttaggattac	aaatgtatat	aggagataat	3540
agtatccact	ccgaattttt	atgtgatacc	tttcaacgtg	ttataagaga	agagaagaatg	3600
atgaagaata	gtagtcaagt	catatttatgt	tgtttacgat	gttttatattc	agatcttaat	3660
ttattagata	tacattcttt	atcaacagat	gaaaatgtaa	aatctatatg	taaaaacttct	3720
ttagacaatt	tgctgaaaag	aaatatTTtg	actactttta	gttggtattt	acaaaacttt	3780
aaaatatttaa	gtcacgaaaa	acatatattt	atatattctt	taaaatgttc	attgcttata	3840
ataaattttgt	tagcaaaaatt	aggtggaacc	acatatataa	taaaagagaa	aaaaaatatt	3900
cataatgact	ctcatgatga	taacaacgat	gatagtgtta	atgattctaa	tgatgatacc	3960
aacaatgtta	atgttaatgt	taatgttaat	gattattatg	atgatgatga	tgatgataac	4020
aataataata	accgaataga	caaaaaaaaa	aaacataaaa	aaaagaaata	taataatgaa	4080
cctatggaaa	aaatagacgt	ttctgatcta	gtagaagaaa	tatttaacgg	gaaaatagta	4140
aatatatgta	tgcatatatt	agaaaatttc	aaaagaaata	gtttatatat	aaatgattta	4200
attataacct	atTTttgaaca	tttaataaaa	cataaaaaata	atgaatataa	tttcttaata	4260
ttttttgata	ttaaatattt	tcttatattt	aaagatatta	ttaatgatcc	tgaagcatat	4320
aataatccac	attattattg	gatcccatgt	ttctttgaaa	atattattgc	atgctttttt	4380
aaaatattgga	aaagcaatta	ttttattggt	aatgaacttc	tctttactaa	agatataaat	4440
aaaaataaatt	caaattctatt	aaatgaaaaa	tattttattat	ctatatTTtag	taattataat	4500
gaagggaatg	atccattttat	ttttcaacaa	ttaaatgaag	ggatatatat	aatgatata	4560
tttataaaatt	taaataataa	aaaaagatta	gaatcttttag	aatgggtctaa	tgaagatata	4620
gaaaatctaa	aattttattt	taaacaaatt	aaacacatgc	ataatttctt	acctttcatt	4680
agtgaatgt	taaataaaatc	atcaaatgtt	gtaaaaaatc	aattaatcta	tttaaaattat	4740
ttagataaaa	gaggaaaagt	tatatatgat	gatcaatatg	aaagtataa	tatgatttct	4800
tcttcttctt	cttcatcatc	atcttcatca	tcattcttcat	cattatcttc	atcatcatca	4860
ttatcttggtg	tatcttattt	atcagaggca	caaaatagta	ataacaaatc	aaatgattct	4920
ttaaaaatgt	cttattcaaa	aaagaagaaa	caacatacaa	atgaacatat	gaatcatcat	4980
caaaattatc	ctatgagaaa	aacaaaacaa	ccgcttcttt	atatcatata	taaattaaaa	5040
aaattaaatt	ataataataa	taataataat	aataataata	ataataataa	tgatgataat	5100
acaaaagatc	aaccaaaatt	aactgttaac	gaaattaaact	gtaatgtgga	tactgtctta	5160
gaagaaataa	acgtcaactt	aaaatcttta	tatgaattaa	aaaaattatc	gaagaataaa	5220
atattcaata	ataaagcgtt	agcatttgac	attccattaa	gcatatcccc	tgatctactt	5280
gaacatcatt	actttaaaaa	attgttaaaa	catataggct	ttctatataa	ccaaaatggt	5340
gatgaatgga	tattaaacga	aaatttagat	atagacattt	ttaaaaaaac	catagacaaa	5400
tttgaacaat	tatatataat	ggatattcaa	aaattgaaaa	agaaattatc	atctcataaa	5460
ttaaatgttc	aaacaaatga	tcaggggaga	agacaagatg	aaaggaacat	tgatcatgag	5520
jacgaacccg	tttcttctaa	cacgggaagat	gatcatgagg	aaaatgatta	ttttacatat	5580
jatcacatag	atgaaaggga	ccataaaaaa	tgtgatgata	aaaaatatag	tgataataca	5640
aatgaaacat	atgatgacca	aaaatgtgat	gataatacaa	atgaaacata	tgataatgaa	5700
aatgtgacg	aagcaataaa	taacaaacat	atggatgaac	agaattaca	tttgcgtagt	5760
ccctctataa	aaaccaaagg	tacattgaaa	cttttaaaaa	taatgtatga	atTTtttatt	5820
caaatgatg	atgaatgtag	attatttttt	aataatttaa	taaataccat	taaagagaaa	5880
gtattattta	tctttgaaaa	attaaaaaaa	tgcaaaactag	atcatgacat	attgtataag	5940
jacactacaa	ataattatta	tgatcatact	tcacatcctg	ttcaaatatg	ttttgaagat	6000
ataaaaatat	atttgaataa	taacgaaaag	agtatttttaa	aaggtagatg	taaacataaa	6060

aatatttctag	aagaactttt	ggaaatatta	ggtttgtaca	tttctaattgt	cccattgttta	6120
attatttagca	aacatataaa	agaagaagag	ttctatgaaa	gaattacaac	tattaatgat	6180
cataaaactt	taagcttaaa	cgattttaaat	atgattataa	ctacaaaagga	aaaagaaatc	6240
aaagaaaaaa	aaaaaaaaaa	aaaagaagaa	agaaaaaccaa	gtgcacacca	aaaatttgca	6300
tttattaaaa	gtatatgtga	atattttaaat	tataattata	ttattaggaa	tacttacaaa	6360
agcgaacaaa	atacaaacaa	tcataatgat	aacaacatta	tttataataa	tacatattct	6420
aagttgaaag	atacatattt	tggatgatgat	aagttatttaa	cagcactcta	tgataagcta	6480
aatatatgga	ataatagacg	aaagaaaaaa	aatgatgaca	tggatattgga	gataccgatc	6540
cctcaattttg	ttggatcgat	gtgtaatgtg	ggaacttctg	agggagaaca	tgaacaaaaa	6600
cttgatgaaa	gtaagaatat	atatacaaaag	gaatataata	atgatgaaaa	gtttcttaag	6660
tctcatatta	attgtcaaga	tgataactcaa	aagataatcct	ctttagttat	acatataggt	6720
atttgtttga	agggagaata	tcacgatgaa	tctatttttaa	aatggacatg	tgaacaaata	6780
catagagagt	ggatgaaaat	tatgttaaaa	ttatttttata	atatccttta	tgatactaca	6840
tataatgtta	taggaaaatt	atttaaggaa	tataaaaaata	tcaaagaaat	attaaacgac	6900
cagtcttctg	atttttttga	tatgtataaa	tcagataaaa	agaaaaaaa	gaaaaagaaa	6960
gaactcgatg	atgttgagaa	ggagggtcaa	ccaaaaatgg	gagtgggaaa	tgatgataac	7020
ataaatgggtg	ataaaaacat	atatgatgat	aacataaatg	gtgatgataa	cataaatgggt	7080
gataaaaaaca	tatatgatga	tgataaaaaac	atatatgatg	atgatgataa	cataaatgggt	7140
gataaaaaaca	tatatgatgg	taattacaaa	atatcgtata	gtaaagaata	tgaacatatt	7200
catatggatg	aaaaaaaaaga	agtagaaaaa	gaataccaca	tatacgataa	caataataat	7260
aatgataata	ataatgataa	taataatgat	aataataata	atagtcacac	cttagcgttt	7320
cagaatagaa	ctcaaggaga	aacaacattt	actaacataa	acaatataac	aaatgatatt	7380
tgtgaaaaag	gtaataaata	tacatcaaat	gtaaaataata	ttaataatat	caatgaaatg	7440
acatgtaaag	aatccgttga	agttaatgaa	ataattcaaa	agacaaaata	aagaaaattt	7500
cataatatag	aattaaaaga	acattattgt	tatgattttat	tcaaaaaaag	gaaattagaa	7560
aatacttata	gaaatacata	taagaaaaat	agaaaaatta	ttattaactg	cttattaaca	7620
aataaaaaata	tttttcaata	taaagaacat	gatattgtta	ataagggtcaa	gcaaattttt	7680
attaaggcaa	aacatatggc	aacaaatggg	gtgagaaaaat	aa		7722

&lt;210&gt; 302

&lt;211&gt; 1374

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 302

atgaaaaaag	agaataacttc	cctgttatca	tcaagatata	gaataatatt	aggaggattt	60
ttaattcatt	gtacgttagg	aagcattttat	tgtttttcta	atataagtg	atatgtaata	120
tcatatatga	aaataatagg	atgttctgat	gtaaaatata	aagatagtag	ttggatatat	180
gtgttgactt	tattatttca	atgttttttt	ggtttttttg	gaggaatatt	aaatcagaat	240
ttaggaccac	agattagtgt	cttattaggt	ggatgggttaa	tgtgtttagg	aatattatta	300
tcatatttta	ctgtttttta	tttttattta	tttttaataa	cttatggaa	attatgtgga	360
ataggatgtg	gaatagcata	tcctatccct	ttatcagtgg	ctgtcaaaaa	gcactatgat	420
tacaaaggag	tgattagcgg	tatcatattc	ataggagag	gactttccgt	gttcattatt	480
tgccctttac	agaattatta	cataaaataa	tataattata	tgccagatta	tatgcccgaa	540
atagaaaaact	ccgatgagaa	atatttttagt	aacttagata	tattaaataa	ggtaccttat	600
ttgtttatat	atgaaggaat	atgttttgct	attattcagt	ttttgggttc	atattttaatt	660
gcagattcag	tgatacatc	taaggatttc	atggcatata	atgataggaa	taataaagta	720
ttatattttg	aagaaaaaaa	ttttataaat	aagccaaatg	gtttatctaa	ttctttaaga	780
acattatcga	atacatcgaa	tttttcattt	agagaagtaa	ataatacatt	tattaatcgt	840
gaatttatat	taatatggtt	aatgatcttt	tttaattggc	aagctatatc	atataactca	900
gtatttttga	aaatatttgg	gatgaattat	ttatctattg	atgatagatc	attatcatta	960
ttaggatctg	tatcttctct	ttttaatatt	tttggtagga	tcttttgggg	acttataagt	1020
gactttacaa	gttttaaaac	aacattaata	ttaatgagtc	ttcttatgag	ctttttaaca	1080
atcacattaa	caatgtcagg	attttatggt	attataactt	attctatatg	ggtatgtctt	1140
attttctttt	gtcatgctgg	cacttttgca	atattcccat	ccataactgc	ccatacattt	1200
ggaacaaaaa	atttcggacc	agtttttggg	ctcctattta	cagcacgagc	tttttcaagt	1260
ataattaatg	caatcatatc	agctgtcctg	ttaaaataata	ttggtaatat	tgcaatgtgt	1320
gcaattgttt	ccttatcatc	ctttgtcagc	atcatgttag	cactagcatt	ttaa	1374

&lt;210&gt; 303

&lt;211&gt; 4041

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 303

atgaagaaaa	agtatgtatt	tctaacgaaa	gaaattaatg	tgtttaaaata	tgttacaata	60
aacgatgaaa	taagaaaata	tatattaaga	tgtacctctt	ttaataataa	tggttgtaat	120
aatcaattca	taaagaagtt	acatttttat	catacctatg	ttcctacctt	ttattcttat	180

ttgaaaaaat	tagaaattaa	aaaaaaatgt	catatatata	atgagaataa	caacattgta	240
atatataaaa	gactcatatg	tattcataaa	aataaaaaagg	aatatcatgt	taataataat	300
gaagttccaa	ttaataatga	agatgggaaa	gataataagg	taaatataaa	ggaaaaataat	360
aaaatgtata	gaaaatagtaa	agatcatata	cataaaaaaa	aaaatcatgt	aaaaataaat	420
tataataaaa	tattaataca	acaaatgaa	caacataaaa	aatcaaaaat	agaagataag	480
tggaatgaaa	attctcatgt	tagagaagat	gaaatatatt	tacatgtcaa	taatttatgt	540
aaaaaaat	actacttaag	taaaaataaa	ataaaagatg	aaaatctatg	gaaacattac	600
ttaataacaat	attataaaga	gaacaaaaat	tatgatcata	taaaaataaa	aaatatattt	660
atgttattgt	tggaatttac	aaatagtaac	aaacatataa	aagacatgat	aattgttatt	720
aatgacgagg	aaaagataaa	tgaaaaaggga	aaaaaaataa	aaaacataaa	aattattgaa	780
attgtttata	atcatctaga	tattttatca	aaaaaaataa	atcaaatgac	aaataatcaa	840
ttaagcatat	ttttatacat	tcttgaaaaa	tggaatatga	tagataatta	taaagatatt	900
actaatgaaa	ttaattttta	aatttttaac	caaacaagtt	taaaaaaagt	aatataaaaa	960
tgttttttta	atgtttttata	tatatattca	aaaaattatg	aacaaaatgt	aaacaaaaac	1020
aacaacaacg	aaaacaaaaa	caacaaaaac	aacaacagca	ataataataa	taatatattg	1080
aaagaacaaa	agtgtgttat	tacaaaagat	aaaataaaaa	tatttatcaa	caaatttgga	1140
aaacaaaagt	ttcgtataga	agatatttta	tatcttctat	catctatgta	taaattaaaa	1200
ataaaaaata	aaagcatttt	aaataatata	atacaatatt	taaatataca	aaatgttata	1260
aaagattcaa	attatttttt	aatcccatct	ttgttattat	cattagctaa	cttaaatata	1320
tatgatcaac	aatttatatt	aaattttcaa	aatgttataa	tggaataata	ttatttttat	1380
aactccatac	attttacaaa	tttattttac	tcatttgcta	aatttaaacc	agattatgta	1440
caagaacttt	ttgaaaaaat	tgctaccat	ataatgatgc	acacaaataa	ttcttctaca	1500
gataataata	aatccacgcc	agaaaacaaa	atcattttta	aaggaaagga	aaaagaaata	1560
aataacaatc	ctaattttta	aaatcataaa	aataatgatt	tttttgaaaa	tgacgacaag	1620
tatacaatta	ataacaaaat	ggtggaccaa	acaaataata	atacttttaa	tatattttcaa	1680
atcaccaata	ttataaaact	atgcctgaaa	tgtaattacg	taaattatga	ttttttttct	1740
tattttactta	aacaaggaaa	tttattcatg	gataattctg	aacctttaga	taattttaatt	1800
aatgttctta	attgtgtttc	aaatatatta	aaacatttta	atgtctttta	atataaatta	1860
tattttctgt	atgaaaaaaa	agaaaaaat	caatggcaac	aagaaaattg	gctagtccac	1920
aatgacctga	cttgttcagg	aaaaaatcat	gaaaattcaa	gaaataaaat	agctaactgg	1980
caaaaataaa	tagagcataa	taatttagat	aataaaaaata	ataatatgga	ttttaacaat	2040
atgatgacaa	gtcctttata	ttattattat	tattattatt	atgataatga	tccatcaaag	2100
ggatattgta	atttgtttga	aatattgtat	ggttataaca	gtggttataa	tttatataca	2160
agtttttagtt	ctttatctta	tgttgtaaaa	tataatgaac	aaatgttttt	aaaaaaattt	2220
aaagattcaa	agcaatctga	ggtaccacat	aactttgaaa	ttcatttgga	taataataagt	2280
gataaaaat	taaaaataat	tgaacaaaat	ttgaatcatg	aaaatatgaa	atatataaatt	2340
cataatttaa	tgataagttt	atctttatgt	gatataaaat	atttaaattt	atatgcattg	2400
tgttttttta	ttcttaaaga	aaattattat	tatttaagta	tagacaattt	atatttgtac	2460
ttggaaatat	tacatcgaat	gaaaatatat	aatcatgata	ttttttactc	aataatggaa	2520
tatataaata	cacatgtaca	cgccttagaa	tcccagaaaa	aaatgaaaat	gtgtgatttt	2580
tcataataa	tttttcaaaa	aatggacaac	cctgtagata	tgaaagaaat	aatgttagga	2640
tttttaagtt	caaataacaa	aattgagaaa	gaaaatggta	acgatgattt	aaagcaaaat	2700
aaatgtacac	atgagaaaaa	cttgtggaaa	ctacctacag	atattgaaat	tgataagatg	2760
ttaataaacc	tagaaaattt	tcaaaaggag	ttactctcta	ataatgataa	taataatgat	2820
gaatttcatg	ataataattg	taatatcatt	ggacatgata	aatttttttc	ggttttttaa	2880
gaaaataaga	ttaaaaaaga	aaaatatttt	aatttaaaga	atgaaataat	tttttttata	2940
aaaatagaga	aaacagaaac	attaccatgt	actttaaata	tatatgatta	tataaaattt	3000
ttatttaatt	taattttttta	tcaatgtaat	aaataagatta	aagaatgtga	tgaaaaaata	3060
aatttgaatt	ttttattttc	aaaagatgaa	aatgttatta	ttacaattca	aaatgaaatg	3120
tatgaaaaaa	ataataaaat	aaaaaatcct	tgtaaatatg	taaaaaataa	acaatatatg	3180
ttagacaaat	attctgaaat	gttaaaaagaa	aattttattta	atatcgaaat	atctcttatt	3240
caattatttt	caatatttgt	taatctttta	gaaaagggag	aagatgataa	agaattattt	3300
gtaaatcaaa	taatgtttat	tttagatttt	ataaaaaatta	taaatgaaaa	agtttatata	3360
aatataatga	agattgtaaa	gaaaatgaaa	aatttatgatg	aaaatataaa	aagaaaaaat	3420
tattttacaa	catattcaaa	gaataaatat	tttcaattaa	aaaaaattga	tttagaatat	3480
ataaattcaa	atattaataa	taaaaaaaaa	aatacatata	atgatttttt	ttttaatgaa	3540
aataatataa	attatagata	tcaatatcaa	agtgttcata	aagctataca	acttttctca	3600
gataatataa	taagatattc	acataatgaa	aaaataaata	cacattataa	aaataataaa	3660
tatattatta	aagacataaa	aacattttat	aaattagaca	attttttaat	atcagatatt	3720
ttacttatat	tagaaaaaca	aaataaagaa	caaatttttt	atttcctttt	atttttatcct	3780
tttgaattaa	aacaaacagt	tatccatata	aaaaataata	cattttttatt	taattacaaa	3840
tatgatgaaa	ccttttttatt	taatatggaa	atattatttc	tttataattt	tttgaagaac	3900
aaatttttcag	aaaaaacctg	ttcatttagt	attatagata	ctactcaatt	tattgacttt	3960
tcaaaaaatg	aatatacaaa	tgggcacacc	aatgaatttt	atgaacactt	atttaatagt	4020
atcatggatg	aagaaaatta	a				4041

&lt;210&gt; 304

&lt;211&gt; 810

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 304

atgcaggaaa	gaaaaaatat	ggtttgtaaaa	caaaacaaca	atactcttag	actagagggtt	60
tataaaaaag	ggacttttaa	aaatactttt	tttggatcag	ctgaaattca	tatatatagt	120
gaaatagtaa	agaaattatt	tccttgcaat	gtttatttta	atatcactaa	taaaaaatcaa	180
attgttggtg	cagcatgttt	atcattccac	tatattaatt	tagattgtat	aaaaaaagat	240
gaccagatat	atacttctct	ttttattgaa	acaattatat	ccgttcaaaa	aaatcaaaaca	300
aaaaataatg	aaaaaattga	aaaactttata	gatgagggga	aagagcattt	tgaggccatc	360
aaagaaacgg	accttagcac	aagtgaagtat	atcataattt	tttttcaaaa	catatataaaa	420
ttaatacatg	ttgatataata	tatatatata	tatatatata	tgtataattt	tttttttttt	480
tttttagcca	tataataaaa	cataatcaaat	ttggttcttg	aagataaaaat	tcgtttgttc	540
tgcaaaaatt	taaatgggta	tttgcttcac	agtaattttt	atataaaaacg	atttttataac	600
aagtattact	tttacttgca	ttttttttaa	ggcaaatttt	actggtgtta	ttataacgaa	660
gaagctgatg	caaagggtaaa	aaaaataata	aaaatatata	tatatatata	tatatataaaa	720
tgcttctttg	tgcttatgta	ttatatatgt	acatattctt	tatcattttat	ttttgtgtat	780
atttcccccc	ttaattttat	agatggataa				810

&lt;210&gt; 305

&lt;211&gt; 945

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 305

atgatcgacc	tgtttgatca	tttaaaatcc	ctagggataa	aaaaaaataa	aggaaatgca	60
aaaaatatga	tacaatgggt	tattttttaa	aaagataaaa	taatagataa	cacggttgat	120
ttaaatgaag	aaacaattct	taatatgtat	aatgaaaaga	aaagcgattt	aagaatatat	180
gtggataagg	ttgatagtat	aaaaatggag	ataaaaaaaa	ttcaaaaaga	tgtagatgaa	240
atatcatgtt	taaaaaataa	aataaatatt	tctattactg	tagaacaaga	aatgaatta	300
agtatagaat	taaataaaact	tataaaagat	acaaatgatt	taattaatat	aataaaaaatt	360
gatatacgta	atttaagaaa	gaaatatgtt	ctaagatcaa	aagaaaagttt	ttatataaaa	420
aaggctatat	acgataatgt	tataaatata	tttaagaaat	cattacacac	atatcaagat	480
gtacaaaata	tatatcatga	tggaatgaaa	gataaaaata	ctagacatat	taaaattatg	540
tatcctaatt	atagtgtatg	agatattagt	acttttttaa	attatgatga	tataaataca	600
caaaatttag	taaaatggaa	attacaaggt	catcaagatt	taaaaaatgc	attaacagac	660
gtagaaacaa	aataataaaga	tgtaaaaaca	ttagaaaaaa	gtgtatgtga	tttacatcaa	720
acaataatag	aattatctgc	attaatagaa	atgaatgatg	aaattattga	taatattttat	780
gatcatgtta	atgatgctca	atatttttaca	gaaaaagcaa	atgtagattt	aatagaagct	840
agaaacatac	aaaaaaaaaac	ttctaataatg	atgttctatt	taaccgtgac	aatcataatt	900
cttatactta	ttatttttctt	tccaataata	acaaaaatta	tataa		945

&lt;210&gt; 306

&lt;211&gt; 1248

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 306

atgaagataa	gtttttttatt	taagtttagtt	tgtatatata	ttgtaataat	attttttattt	60
caagatgtaa	gatgtataaa	aacaaaaaag	atagtaagat	gctttaaccc	atttgttcgc	120
acaaagacca	taaaaaagaa	agtacagcca	aatttttttaa	aaagagttgc	attgaaattta	180
aagattcccc	aaacaattaa	tttgataaaga	gggaaatata	atattattaca	tgagatatat	240
gtaaataaaga	agaaacatat	ttttaatgtg	atattataaag	atatcataag	taataataaag	300
aaacgttttt	tgaatatgtt	aaaaaacata	gtaaaaaagc	agcgtagtat	taataatacca	360
ttatttttta	ataaaaacaat	gcattcattt	catttctaatt	ttatatatta	ttatacgtac	420
ttttatatat	taagaacaga	tttatattta	aggacactca	aaaaatttca	taacgtttta	480
ataggaaagt	ttaaaattaa	tatatattaag	aaagtattat	atagtttgtc	tgctttcgtat	540
aaaatgtttt	tatggaacga	tggaagaatt	tcaaaaaattt	tgcataaata	tatttttaaaa	600
tgtgaaagaa	aattaaatcg	tggtgcagat	gagtgctttt	taaatagtcc	attatgtaat	660
aataatacat	cgccagtaaa	aagaaaaaaa	agaacatggt	ttttagtagta	tgataaatgtt	720
attacatatata	atgatttttaa	tgatcaagtg	gaaacaaaaa	aagaaaaagtt	ttatattttca	780
gctttttaaag	tattaccatt	atttttttat	aatgtttttta	atataaaattt	ttattttaaaa	840
actattaaaa	aaattagaaa	ttcaattaat	acaaatatta	gattgtatct	tctaaaagat	900
tatattaatg	atcaagattc	aataaaaagca	attttctata	catataaaaac	atttttttcag	960
ttgtcattag	aaaaaaaatat	tgtttctctt	tttagagtat	ttcaagataa	aatgagcatt	1020
gaacaaaaat	ttgaaacaac	attaattaat	aatatggaaa	agcaactcaa	aatcaaatta	1080
ccaaatatag	gtttaaccaa	tataacaaat	ctttctctta	ttctgtttta	acttttttgca	1140
aataaaaatta	ctcaagttgt	cttttatctt	attctagtgt	atataaaaaca	attcttgtat	1200
gctagaagaa	aattctttaa	agatatttat	cttttccctt	tttatttaa		1248

<210> 307  
 <211> 855  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 307  
 atgaaagaaa aaaatgagaa aataatggat tacttatcat gccccctcga cgatgtagtt 60  
 gatcgagaaa aaaaaagtgg taaaaatagt ttgttaaaat caagtagtac gaagaaaagt 120  
 gattataaaa aaagtagtat atttttctaaa aaaagagatt ctcataaaaa aggatcaagt 180  
 tttaggggaa gaagatctgg atttatcaat agaaaatcag gaagttttta aaagccatat 240  
 tataataata gattaattaa caaaaattat aataactata aaggtagaaa ttttcataat 300  
 ggaagagata attttaaaagg acgaactgga agtttttggtt cactgtgtctt tgataatcgt 360  
 aaaggatctt ttaaaaaaag atttataagt aatagaaata aatcatctgt aaaatcatat 420  
 agaggaaatg gttctaataa aatgggtaga aaatcattta acaaagcacc tacatcaaga 480  
 acagttgttta ctaaaagatt aaataattat aaaactgttt cagctccagt gaaaaaattt 540  
 aataacttaa atatttcctt atatcgtaaa aatagaacat ttgcattaaa taccaagaga 600  
 tctaaacctg taggaacaat taaaagtatg gtacctagaa aaagaattaa gaaagggttta 660  
 aaaaaaggga gcttgaaatc aaaaactaga aaaagtacat cgggatcaaa attttaaactt 720  
 ttaataaat actttttgtc taaaataaaa attgttactt cattaaataa aataccatca 780  
 cccctaaagg aacaaaaaaa tactgaagtt aatcttccag aatcattaaa taatgcaaca 840  
 acaaagaaaa attaa 855

<210> 308  
 <211> 3366  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 308  
 atgtttgctt taaagaaaaa tacagtaaga gaagggtttt tgaatatatg tttctcatat 60  
 ttaaaaaaat tatatttaaa atcaaatttt gtactgttaa atctgaatta tgaaactaat 120  
 aatgaaaaaa gaacgaacaa aaaaatttat aaaaaaagca aagcgagtc tctcttcgat 180  
 aaagggttta atatacacga taaggttaata ttatttaaaa atttacccaa atacaaatgt 240  
 gcgaaatatg aatgtataag tgccaaggag gtttataaat atttattaga tgaatataag 300  
 aaatgcttta attatataag tttgtgtgat attatacaaa gtgttaaaat atttgatgaa 360  
 cttgataaaa catttactga ttacaatttc tatatagaag ttaaaaaat agacaaaaat 420  
 gtattaaata agattaatga aattttattc aaaaaataagg atataacttt tcatagaaga 480  
 gaaatattgg gaaaaatctg taataaaatc atgagttata tacatgaaat gaatggaaat 540  
 gaattaattc attttcttat ttactttttt agatggaata agaacgataa gaatttgatt 600  
 cttttttata attattattt taattatggt tttgatcata tgtatctttt caaccatgaa 660  
 atatacaaac tattattcat atttaataaa tatcttaata ataattcaaa cataccattc 720  
 aataaaaaatc taatacagga aatggaattt aatctatatt attttaggga aataaaaaat 780  
 gagaaaaatt atattattaa aatgaataaa aaggaaattt ataaaaatg ttttgcaag 840  
 tttcatgaaa atgtagacca catcgacata gaaaagatat taaatatttt aaggttatat 900  
 gttgataatt caattttaga tattgacata aataataaaa tgctatgtaa tcttaataat 960  
 aatttgataa atgaaaatat tgaatacata tcaaaattgt taaattttta ttgtactttg 1020  
 attaaaaagg gaaaatatga taatgatatg acaatatata aattaaaaaga agtaataaaa 1080  
 gcaacacatc atattttgtg tgacaaaacg aaaaatctag aaactttttg ttcagatata 1140  
 gattatagta cattactaaa ttcatataat aataaattta ttttaataaa aataatagat 1200  
 aaaaatttta ttttatttta tgagtgttta ttaaagattc tattaataat caaatttgta 1260  
 aattttcagt ctctttgtat ttcacttatt tcttttaaaa atattttatta taatatatta 1320  
 agaaataacg tttatattgt taacaatgta ttatttaatg atattatgaa gtttagttta 1380  
 tattttgtgta atatcttcct tggtaaactg ataaaaacag aaaatgaaaa tgcagtactt 1440  
 attatacata ataagatca aacaaattat tcaaataaag aaaatataaa agatataata 1500  
 atacaaaaga gaataaaaaga atatatattt tataaaatgg aaaattataa agattttcat 1560  
 tttaaattaa aagatagtgta tttattgtct attaaacttt tgtaaaatc ttttgtaaaa 1620  
 atcaatgaag tgtataattc gtatgatttt ttattactgt ttaataacat atcatgtatt 1680  
 ttatataaatt ttttagtaaa tagaaatagt gtaaaaaaat ataaagatac ttatatatat 1740  
 attttgaatg acctttcttt tgtctataaa tatataaaga ataagatag aacccaaaaa 1800  
 aaaaaaaatt tttttttatt atcaagttct atgaaggaaat taatatgtaa aaatatatta 1860  
 agtgtgagta atagatatat aaaacattta catgaaggag ataatttcga tcaaaaggat 1920  
 caatatgttt gttccttaac atttttgaat aattttattt tcgataaaat tattcatttt 1980  
 cattatatat ataacttatg gtgtcacgtg tataaaacat acaactattt taaatgtaat 2040  
 aagtttaatta atgaagatat aatatcctta ttacttttga cgtgttccaa gtttcagtat 2100  
 tttattgaga ataattctaa tgatagatat tgtagaaagg agttgatata tttaaaaat 2160  
 aatattattg atgatttaaa taaaaattat ttaaatatcat ataatctat atctattgat 2220  
 aatattttcta aaatttttat atcattatca aatttcgaaat atacatgtga agttaatgaa 2280  
 aatttattat tagaaagttt acagagtgag ttgtgaaaaa taacaaaaac tagtaaaaaa 2340

ggaggtatcac atatgatgga caataattta ttagataata ataattcttg tgagaaatat 2400  
 gaacatagat atattgaata taagaaggaa aacttattta taaatttgaa caaaattatt 2460  
 gaatgttttaa taaaattaaa tatattttta ttttaaaaa aaaaaaagac atatttatat 2520  
 ctatataagc aatctttatg tcctataaat ctgaaagaaa atatttttaa aaaaatatta 2580  
 tatatagcaa ataatttgta catgtatgaa atgtatggct atgtatgtga aatgttagag 2640  
 aggggtcttat catcccacaa agaacaaaat ttgttttcat ataattataa taaaaatgta 2700  
 gaacataaaa tgtttgataa aattctatgt cacatttcag aagatgatta tattgaaatg 2760  
 tcaaatacaa tgtatgtgtt gttttatgat ttttaaaaa atataaatag tgaacgacaa 2820  
 agtaatatatt taaggaacaa ttcaacgaat gatagattca ttgatgaaat aaaagaaaaa 2880  
 aaatatataa taataataa cacacttatt aagcataata atgtgaaatt aaattatgag 2940  
 aaaagtaata atagtaatgg aaatatagtt aacattctta aggatgataa aaataagaat 3000  
 cataataatg ttgaaatgga tttaatagat aacaaaaatg aaaataaaaa aattcaggag 3060  
 aaaggctcaga atgggtgaaa ttgtgaaaat tgtaaagatg tgttggtaaa tgatattata 3120  
 aacatatattg gattttttaa aatggagaaa aagaaatttt tatttttttca acttttatatg 3180  
 tatctatgta atataacaaa attttaaagg agatatgtat cttcttcttc tttatttcat 3240  
 atggatgttt tcaaaattat aaaggatatg aattttaaagt atctgtgttt agagaattat 3300  
 aaaataaaaa atgaagaatg tgcttttttg tatactatag atatagtttt gtttaaagaa 3360  
 agataa 3366

&lt;210&gt; 309

&lt;211&gt; 708

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 309

atggaaaaga aaagtagtta taaaacagtt ttattaggag aatcatcagt aggaaaaatca 60  
 agtatagttt tacgattaac aaaagatact tttcatgaga atactaacac aacaatagggt 120  
 gcatcttttt gtacatatgt agtaaattta aatgatataa atataaagaa tataagtaat 180  
 aatgaaaaaa ataataatat aaattcaata aatgatgata ataatggtat tataacaaat 240  
 caacataata attataatga aaacttatgt aatataaaat ttgatatatg ggatacagct 300  
 ggacaagaaa gatatgcaag tattgtccca ctatattata gaggtgctac ttgtgctata 360  
 gtagttttttg atattagcaa ttcaaatact ttagatcgag ctaagacatg ggttaatcaa 420  
 ttaaaaatta gtagtaacta tattattatt ttagttgcta ataaaaataga taaaaacaaa 480  
 ttccaagttg atatataga agtacaaaaa tatgctcaag acaataattt actttttatt 540  
 caaacaagtg ccaaaactgg acaaacata aaaaatatat tctacatgct tgctgaagaa 600  
 atttataaaa atattataaa taataataat acctcaaaaa ataaaacagt taataaaaaac 660  
 ttaataaatc tagataatca aacactttca aaaaaaggat gttgttaa 708

&lt;210&gt; 310

&lt;211&gt; 1155

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 310

atgtttctat attttattac atatctgtgt attttccata ataatatata ttctgtagaa 60  
 ttaattaaaa ataataaata taattttata aataatgtgc ataataaaa gtatagaact 120  
 aaaataacgtg ctattttatgg gaaaagtaat aaatacgttt atatgtttgt ttgtttgtat 180  
 gtatctggag gtaaaataat aggacatggc cattcttacc cttcaactga aatttataat 240  
 gacgaattaa aaaaatatgt tgataccaat gatgaatgga taagaacaag aacaggaatt 300  
 aaaaaaagaa gaattattaaa aagggtatgaa aatatatcaa tgttacaat agatagtgtc 360  
 actcaagctt tagagacttc ttgtttaaaa ccctcagata tagacatggc tatcaatgca 420  
 tcgtctactc ctcaaaattt atttgggtgat gcaataaata ttagtaacaa aattggatgt 480  
 aaaaatagtg ttaatatgga tctaacggct gcatgtacag gttttatttt tgcttttgtt 540  
 acagcttata atttttttaa tagatataaa aacattttta ttgttggttag tgatgcctta 600  
 agtaattttg tagactggag agatcgtaat acttgtgttt tatttggaga tgctgcagggt 660  
 gctgttgtat tacaacgaac tgaagagaaa gaagaaaaata aaatattcaa ttattatctt 720  
 ggatctgata gtgaactaaa tgacctctta accataaatt ttgatcatga caaatataat 780  
 ttagataagc ctaatgtaaa taagtatggg aaattatata tgaatgggaa ggaagtattt 840  
 aaatatata taagcaatat acccaaaatt ttaaaaaaag ctatacaaca ttcaaatata 900  
 aatattgaag atataaatta ttttatattt catcaagcta acatcagaat tatagaaaca 960  
 gtagccaaaa attttaaata acctatgtca aagggtattag taaatctaga cgagtatgca 1020  
 aatacttcag cagcttcaat acctttatgc ttctctgaaa atattaaaaa tgggtaaaaa 1080  
 aaaacgaatg atataatatg tatgtgtgga tttggagctg gaatgtcata tggatgcgtt 1140  
 atacttaaat attaa 1155

&lt;210&gt; 311

&lt;211&gt; 3738



&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 311

```

atgaatgaga gagtggttaa tgttgccatg aagtataagt catcatgtct attatataaa 60
aaaaatttta atttcaaatt attttccatat ttaaaagtgt gttatcataa tgatttatgg 120
ttacataaaa aaaatcaaaa tgggtgatag gatagtagaa atatatcatt ggttagcgca 180
caaataaata atgaaaataa gaataataac ataagtgatg ataaggattt gaaaagtgat 240
ggtgtgaaaa aatgcatagg acaaaaaaat aaatttatatt ttgatgaaaa aartcctttg 300
aagtttgga ataggggtac atataaaaaa tggcagtgta gtttttttcc aacatcagaa 360
gagaaaaaat acaagataga aaaatatatg aaattggatg aaaaaaaaaa agataataac 420
attagttgta atgatttaga taatacacaa atgaagataa aaaatcaagt ttaggaaat 480
gattttaatg gttgtaattt agaagagaga aaagataata atgaatatga taatgataaa 540
tataaaaaag attcatttga acaagatgaa gaaaatgaga aaatgagaaa aaagaaagag 600
ataaaaaaga ttttaaatat tatattttgt tcttctatac ctatgattgg ttttggtttt 660
atggatcaat ttattatgat acgttttagt gatattttcg atgcttctat aggagtaact 720
tttggtatat caactctttg tgcagcttct tttggccaat tatgtagtga tacttttgg 780
atattttttg gatatgtttt gaattatttt cttcagacat ataaaaaat tcagcccata 840
aaatatgata taaaaataaa agtttatcaa tattgtactt taataggttc tgttttgggt 900
atattttttg gttgtgcttt aggtatgtta cagttaattt ttattgacac tacaataagt 960
gaacgtttta aaaaaagaa agaacttgat tttatttttc aaatgggtcat gtgtgattgt 1020
tcaaattgtt taaattgtga agcttctact ttatttttat atgacaaggc aaaaaatgaa 1080
ttatggagta aagcaataga tgggaagaaa aatattataa aaatttcggc agatagtgat 1140
gaaaaaagtt tcaatttatg ggttttaaga tccttcacat aataaagaaa ttatcaattg 1200
gctaactcat aactatttaa tccttcacat gatgaaaaat ttaatttcaa aactaaaact 1260
attctagctg cacctatttt agataagaat gatgaagtgt tgggtgttct tatgttctta 1320
aataaattaa gatccacagg tgggtatttt acaagagatg atgaaaagct agctgaaatg 1380
atgtgtaagc atatttccat ttttatggaa aagtttcatt atatcagtga aggggacaaa 1440
aaaatgatca tttttgataa ggaaaagaat aatgttaaag aggaagacga cgaagacgat 1500
gattatgata atgataatga tgatgatgaa gaggggacag agcttaagga gaaagaaaaa 1560
gtgaaggaag aaaaatatga agatatttaa aaaaaaaaaa aaagacaaaa aaggaatatt 1620
cttccatata atattttaaa aatggaaaaa gatgatgata aaatatttga cgagggtgat 1680
gaaaatagag aaagcaaaga attgaatgaa gatgaagatg aggaggaaga cgaggaggaa 1740
gatgaagagg aagacgagga agttgtatat gaagaaaaata tcaaagaaaa taaagatgac 1800
atagattatg atgatgataa atatgataag aattatgagc atgatgaaaa aaaggaaaaa 1860
atattttata agcaaaatgg agatgatcat gatgaaaaca actacgaatt aattcaagat 1920
tattattatg tagaaaaaaa caatatatat aataaaaaatg atactataca atatgaacag 1980
aataataata tttataagac taaatttagt aataatatat atacacctaa atttgataat 2040
tatatggatt ataaagggaa tataaaagaa catacagcaa ataatatcaa acatcaatta 2100
ttgcttttta atattgataa aactatgaag gacgaaattt taacaagtga taaaataaat 2160
aaagataaaa gtagtgatga tattattaat agtaacaaaa catataatga gaaaaacaaa 2220
ttatatactt caaccacagg tatacataag aataatatgg gtagataaatt acaagatgat 2280
acattttatt ttaaattatt aaataagaat aaatattata tgaataatgt taatggaaat 2340
ttggatatat atttatatatt atataatata gaaagtgttg aacaactatt taagaaaaata 2400
aaagaaaaaa atttcttgtt gtttaacatg aaaaattgta ttcgtatgtt tatactcttc 2460
agggatttat atgtgaaaga ggaaaacggt tacaatatta taaaagtca aaataaact 2520
acaacaataa ctactactac taatagtaat gatagtaatg atagtatgta taataacaa 2580
aataataata ataataataa taataataat aattataata ataataattc tgtcatattt 2640
tcaacaaatg aaaaaattta cgatatgcta aatagggata atatatataa aaaggtaaag 2700
aaagaaatat ttgaggggtga ttcaataaatt aagacaatgg aaaataaacc gaacttaaca 2760
aataaaaaat atatgaataa tgacaatatt gataataata ataataataa taataataac 2820
aatattgata ataataataa taataatggt gataatattt ataattgatg tcttaagaaa 2880
tattatttga atacttctat atttaataaa gacttatatg taaaacattt tgtagatatt 2940
attatgaaca aaagtgttga agaaattata aaaatgaatg tatatatatc agaaagaatt 3000
aatagtttat tatttcacaa agggaatatg ttaaatgatg ttacaaaaat atatattgtc 3060
aatgcatatg gtgaaaaatg tttttttttt aattttccac aaataaaaaga aataatattt 3120
gtaaatgaat atgaaaaaaa aatggatatg aaatatttta aaatgttaaa aaaaaatat 3180
aaatataatt taaataaaat tttcagtaat aattataagt tttttataat taaaaaaa 3240
aaaaaattaa aaaaattatg ttatatatg aaaagtttcc atccacatat attagatgaa 3300
ttctgggtta atttatcatg tcaaaatgaa ataaaaata tatattataa aaatttacat 3360
tttggtatta gtttacataa ttcattccat atagatttta aattgtacta cttcaagtat gtattataat 3420
ttaaaaaaaa tatttgaaaa tatatccatc aattgtacta cttcaagtat gtttataat 3480
ataaaaaacg tagattttat ctcatataga aatttgtatc ttttaaaaaa ttatacaatg 3540
catgatctta tttataaata tatttatatat tattattgta gaaaaaaatt aaaaagaaaa 3600
aattttcatt attttaatta tcaagattta tatatagctg aaaactattt tggctctaac 3660
acacatacca agaaggtacc caacatgtta gatcaaaata taggaaaaaa aagtgcata 3720
gtaacagtag agagataa

```

<211> 630  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 312  
 atgctgtttc tttttctttg tattattatt aatacattag tgttcttatg gtttgtcata 60  
 aatatttttt tgaaaagtag taatacatat aaagataagg gaagaaatga aatgggtgaa 120  
 atgggcgtag tacttggtatc tggagggtcat acttatgaaa tgattcaaat acttaaacaa 180  
 ataaaaaata gcaatattct ttttaatttc ttttattcac ataatgacaa ttaagtaaa 240  
 ataaaaacag aaaaatgaatt ggtaattat caaagaatt ttttgtaat accaagatgt 300  
 cgaaatgttg gagattccta ttctttgtca ttataaaaat tcattttttc attttttatat 360  
 tgtatttttt taacatataa aatgaagaat atgaaagtaa ttatgggttaa tgggtccaggc 420  
 gtatgtgtac ccctcgataa ttcatgtgata ttctgaaaa atacttttct aaaaaatatt 480  
 aaaattgtct atatagaaag tatatgcaga gtttatttct tatctttaag tgctaaactt 540  
 ttatattatt ttgctgattt gtttggtgtt ttttctgaac atttaaagaa gaaatataaa 600  
 aaagcaaaat attatggata ctttttctga 630

<210> 313  
 <211> 3702  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 313  
 atgggaaaaa gaataaaatg taataacggt tcttatataa gaactgtcag gggagtttat 60  
 atcggcagaa tagaaaacgg acaaaaagaat ggatgggggt tacaataaaa taataacgga 120  
 aataaatatg aaggcttatt taaaaatgat gaaaagttatt tattcggggt agaattaata 180  
 tgttgtttgt gtggtcatat gtataggaat aaagttcaaa atggaatata tgaaaaaggt 240  
 aaaattcatt ataaggatgt aaataatatt agtgcttaca ataagatga tcagcacgac 300  
 aatattcatc atgaaaaggt ttatcatgaa aatattcatc atgaaaaggt ttatcatgaa 360  
 aatattcatc atgaaaaggt ttatcatgac aatattaatc atgaaaaggt ttatcatggc 420  
 aatatttatg accacaatat ttatcataat aataaattta atttccaata cagtagtgaa 480  
 aacgaatttg ccaagggaaa tatctgcgtc catgaaaata gatataatta tatagggtact 540  
 tataaaaaag gaaaaaaca cgggaaaggt attttaatta attataacaa ttatttttatg 600  
 tatagttgta tattttataa aaacaaaatt atatacgttg atatgttatt ttcaaaggtt 660  
 caaaaatata tgaacatgaa gaattattgac atgaaacatt ataatacaca taagaaaaaa 720  
 aaaatttatt tattcttaca aaaagaatat aaaaaacaaa ttttgggatt tataaatttt 780  
 tataaacata taacacacaa aataaaaaag aaacaagaaa atgttcattgataaaatcact 840  
 tttttaaaat gtctaaagga actctttttt gtcacacata caaataaaga gaataatcaa 900  
 atggagggtta taatacatat ttataaaaat acacaggggg gaaataaaaac acaacatgaa 1020  
 aatattttca aggaaaaatt acataacata acacaggggg gaaataaaaac acaacatgaa 1080  
 aagagataca tgaagacaat ttatagacat gcaggacatg aaaatgtgat acttaataac 1140  
 aaaaggaaag aaaaaaataa aagcacaaat atgagtagtg atgaaaaaaa aacaaacaaa 1200  
 catacaataa taagtagtga tgaaaaaaa aaaaacaaac atacaaatat aagtagtgat 1260  
 gaaaaaaaaa aaaaaaacg tacaatatata cccaatgatg aaaaacaaa tatccaatga 1320  
 aatataatca atgatgaaaa aacaaacaaa cgtacaataa gttattttgtt tttgtcaaat 1380  
 aacaaacata caactataag ttgtgatgaa aatataaaaa aaaaaaaaga aagttatata 1440  
 gaaataaaaa cgaaatattg tatgatagaa gaaagaacat ttgtacaact tgaaaagtat gatttatcaa 1500  
 atgattaata ataacaaaaa taattcaata tgtgatcatg aaaataaaaa aaagaacagg 1560  
 gaagtacagt tttttcaciaa ttttaaaaaga acaaaaaaaa ataagatat tgaacagttg 1620  
 aatattgaaa tgcctttttt ttttaaaaaga taataatttag aaagtggtaa ggatgatatt 1680  
 gtattagttta aaaataaata taacaaatgt aaagataaat taaaagtacc gttttttttt 1740  
 atttataaca atcaaaaagga taaaataaaa aaaaactgttg aaaaacagga agatgaaagg 1800  
 aaagaaaaag gtatatataa tttttttaat ttttttactg acaaggtaac aaatgatgta 1860  
 ttttttgtcc atgaacaaa ataatgatata agaacaaatg atgtaagaac atatgatgta 1920  
 agaacaaatg atataagaac aaatgatata agaacaaatg atataagaac aaatgatata 1980  
 agaacaaatg atataagaac aaatgatata agaacaaatg atataagaac aaatgatata 2040  
 ccaaacaaaa gagaaaccat tgtagatgat ataaatagtt gtagtaataa ttttactaca 2100  
 agaagtaata cagacaacgc gaattcttat catatgaata tgtatagtga tagtaataat 2160  
 ttttatggaa ataaaaagaa aaaaatttaa aaagggaata ataacaaatg tgaatattct 2220  
 tctataatta agaataaaaa ccaattatat aatgaccaga tacataataa tacatgtgta 2280  
 tgtataaaat tcaaaacaaa atgtgtgtct ttttaaaata aataacttga aaaaaaaaaa 2340  
 aaggaaagtt ataaatgcaa cagtcataaa gaattaaaac aacatgataa gaacttggtg 2400  
 ttttaataatt acatttttaa tgataacttt ttggataatg tgtttgtttt aaaacctcct 2460  
 atggatgaag aggaaaaaaa aaaaaattat gacaagttaa aacgtgatac atttccatta 2520  
 tttttaagaa aaaagaaaaa aaaattattt caagctcaga attatatata ctggaacatt 2580  
 tttgaattaa atttattttt ttttttggtt gggataccaa aagaaatatt agagattttt 2640  
 atctatcatc gtttggtatg ttattgttta aaatatattg ataagaagat attaaaagaa 2700  
 atgaaaataa aaaatagaat gatgagaaaa tatatatatt tatgtatata atatttatta 2760



agattaagag	aaaaatataa	atataagaag	aaaagtaata	gtaaattaac	tgaaaaaata	2820
aatgaagatt	ttatTTTTaa	gaaagaacaa	ttacatatTT	taaatTTaat	aggaagagga	2880
ggttatagta	atgtatatag	atgtatatat	ggtaataaaa	atatattaag	aataaataaa	2940
TTTTTgata	tacattatag	tattaataat	acagcattaa	aaatattttt	aaataaaaaa	3000
aaaaatatat	tagaatatTT	tacagaatta	tatatTgtat	caaattTTaag	acatccaaat	3060
gttacattat	TTTTaggagc	aataaaatTT	ccaagagcta	tagtattaga	atatattcaa	3120
tatggaactt	tatttgatat	cttacataaa	tataaaatta	atatgaaatt	acaagatatt	3180
attaaaaatat	ctaaagatat	aacagctTTT	atgtctTTTc	tacataataa	aggtattatg	3240
cattgtgatt	taaaatctTc	aaatattTTa	atatccataa	caagagatat	caaaatatgt	3300
gactttggat	tatctgtatt	taataaatat	aacaagccca	aatatctTgg	tattgtaggg	3360
acttatcaat	ggacagctcc	tgaagtatta	agaagtgaag	gatatacaaa	agaagctgat	3420
atatattctt	ttggagttat	attatgggaa	atgattcata	gaaaaattcc	TTTTagtgat	3480
atgaaaaatc	cttttagatat	tattgtctat	gttggatatg	ctaataaaaa	attaagtgtg	3540
acaaaataaa	atataccaga	ccaattaaaa	tatatattgc	attcatgttt	acataaaaaa	3600
accataaagc	gaaaatctTT	tttattttTg	tctgaatatt	ttgatttctt	atataatggt	3660
acagatatatc	caaaggagga	tcacaccagt	TTTTTTTTT	ga		3702

&lt;210&gt; 314

&lt;211&gt; 1833

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 314

atgtgtgaga	aagacgatat	tactgtgaat	gaggaaattt	tacaaaaggc	acaagagttt	60
caggtggaaa	atgagaagga	tataaagatg	aagaaattaa	aaccaataac	tgaaggggtg	120
ttaaaaccag	aggtcgattt	attacaaata	agtgaagagag	gtagtcgagg	aagagtaaag	180
atatgtaatg	tattaaatgt	tccaagaagc	gaaaagggaat	ataataataa	taatagtgtat	240
aaagtagaaa	ataaatatat	tggtaaaata	attacagtat	gtggttggag	taaagctata	300
cgtaaacaag	gaggtgggaag	atTTTgtTTT	gtgaatttaa	atgatggatc	atgtcattta	360
aatttacaga	ttgttgtaaa	tcagtgtata	gaaaattatg	agaagttatt	aaaatgtgga	420
gcaggttggt	gtTTTcgtTT	tacaggtgaa	tttaattatat	cacctgttca	gaatgataat	480
aataaaaaag	gtttattaaa	agaaaatgta	gaattagcat	taaataataa	tgatattcat	540
aattttgaaa	tttatgggtga	aaatttagat	ccacagaaat	atcctttatc	taaaaagaat	600
cacgggaaag	aatttctaag	agaagtagca	catctaagac	ctagaagtta	ttttattagt	660
tcagtaatta	gaattagaaa	ctcttttatct	attgtctacgc	atttattttt	tcaaagtagg	720
ggattcttat	atattcatatc	acctcttata	acgacctcag	attgtgaagg	aggaggagaa	780
atgtttacag	tcacgacact	tttaaatgaa	aatgggtgata	ttcgtagcat	accaaggatt	840
aatttgaaaa	acaagaaaaa	ggaaaaacgt	gaagatatct	ttaatgaaaa	aatggaaaaa	900
aaggatcata	tgaatgatag	tttaaaataat	aatacatgta	ataataataa	taataatggt	960
aatagtagta	gtagtaatat	tgtttcatct	ccacaatatg	aagataatta	tcttattgat	1020
tataaaaaag	atTTTtttag	taaacaagcc	TTTTtaacag	taagtggaca	attatcatta	1080
gaaaatttat	gttcatctat	gggagatgta	tatacattcg	gaccaacatt	tagagctgaa	1140
aattctcata	cttctagaca	tctagctgaa	TTTTggatga	tagaaccgga	aatagctttt	1200
gcagatttat	acgataatat	ggagctagcg	gaagcctata	taaaatattg	tatcgactat	1260
gttttaataa	ataattttca	tgatattttat	tattttgaag	aaaatgttga	aacgaattta	1320
atcaaaagat	taaaaaatat	attaaatgaa	gattttgcta	aaattacctt	tactaatgct	1380
atagagattt	tacaaaatta	ttcagattca	ttcgaagtga	aagttgaatg	gggaatggat	1440
ttacaatcag	aacatgaaaag	atTTtatagct	gaaaaaatat	ttaaaaaacc	tgttattgta	1500
tataattatc	ctaaagactt	aaaagccttc	tatatgaaat	taaatgaaga	taataaaaca	1560
gttgctgcta	tggatgttct	cgtacctaata	ataggtgaag	tcattgggtg	ctcacaaaga	1620
gaagataaatt	tagaacgcct	agataaaatg	ataaaagaaa	aaaaactaaa	tatagatagc	1680
tattgggtggt	atcgacaact	aagacaatat	ggatcacatc	cacatgcagg	atTTggttta	1740
ggtttcgaaa	gattgattat	gttagtaaca	ggagttgaca	atataaagga	taccatacct	1800
ttccctagat	atcctgggtca	tgcagaattt	ttaa			1833

&lt;210&gt; 315

&lt;211&gt; 1224

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 315

atgttcacgt	ttggaacgtc	aagaaataaa	gaaagtgttt	tgaagaattt	aagtttggtta	60
aatgaagatg	aaggaaaagg	atggaatata	ctatacaaat	tgtacagtca	aattagtgggt	120
tgtgttttaa	tatgtaaaaa	taaaattata	aaatataatt	cttatgataa	tatatTTTTa	180
acttttagttt	atgggtaaaa	agaaaatgtg	aagaatatga	aagaaaaaaa	ttattattat	240
aacgaaataa	aatttatattt	aaaatatttt	ccagaatcta	atataatgat	tacaacaaat	300
aattatgaag	atataaataa	aatgaaatgt	ttaaaatatg	aagttctaaa	taataatatt	360
tattatcaaa	aacataattt	tagtctttta	aaattgtata	ttaatgcatg	taactcacia	420

tatattaaac	ctttattata	ttattcggtta	catacatgta	tcgtaggaga	taatgaatat	480
ataaacgtac	ataagaaaat	tcttcaaaaa	aaaaaaaatg	aaaaatatat	tataaaaaaa	540
gaaccatatac	tattatataa	taataataat	aatgatcatg	taccaaatat	actcaaaagt	600
agaaaatttt	tattaaaaaa	attaaataaa	gaaaaacaag	gaaacgaatt	aaaattacat	660
ttacattgtc	ttaatgtttac	ttttcaatat	caatgtaata	aaataaaaatc	tatatgtgca	720
cctgtaccct	ctcatttttaa	agataacctta	catatttttag	gtgctatcaa	tataattaaa	780
aatatggaaa	atatacaaat	attaaaaaat	gataatttaa	tggaaaatca	aaaccaacag	840
aacaaaatgg	aactctttaa	aaataaaaaat	aataacacat	acgaaaaatc	tatacaaatc	900
aaaaaaaaaac	acgaacataa	aaaagatgaa	gttaaataatt	atgacaacat	gcaagacaaa	960
gaactctttg	aaaaacagaa	tgataactta	ttaaaagata	tatattataa	taaagaggat	1020
gataataata	aacctaaaaat	taatacacat	ttaaatatca	acgaaactgt	tgatacatat	1080
aatcattttaa	acgacgatga	tatgtatggt	gatagaaaca	cctccaaaaa	aaaaagactt	1140
acaaaaagga	ggggtatctt	atcaaaggat	tttaacaaac	tatcaaaaag	agacgctcct	1200
atattttttta	cagatattgc	ataa				1224

&lt;210&gt; 316

&lt;211&gt; 936

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 316

atgagaaaata	atttgattgt	gtttatttgt	ataaccttgt	atttaatatc	atccataacg	60
tgtgtgttta	taaataaata	tgtgttaatg	gaaaatacta	tagatagtgt	tttattaata	120
tttgtaacaac	atatactctg	tttgatgttt	atgttttttt	ttaaagatat	atttttttta	180
aaaaaagaaa	gagatgaaaa	aaatatttaa	gaatctattt	tttctttata	taatgaaata	240
aaagagttat	ggcctttaat	tataacattt	aattttacat	tagtttttgg	gaatatatgc	300
ttaaaatata	caagcatatc	tttttatcag	ctagccagat	ctatgacctt	accattcaat	360
tttttttttt	cgtacttttt	ttttaagcaa	ataaaattta	atcttttaat	gataaatatca	420
tgtattatag	tgtccatagg	atttctaatt	ttttctctcg	acgcagtaaa	taccaattat	480
aattctgtat	tatacgttac	catcgtttca	attatttcagg	ctatacacct	caatttgata	540
aagaagaaat	taattatata	caaagataaa	atggtaaatgt	tatattacaa	tttaatatat	600
tcttctatta	tcttatttat	atatttgttt	ataacaagag	atataattgt	actagtgcac	660
ttggataaag	gacttacatt	ctatcttatt	ttatcatgta	tatcctccat	atttgttacc	720
ttctcttctt	ttctctgcat	tcactataca	gataatgttg	tttttaatat	gtttggtaat	780
gtaaagtcta	ctgtgcaaac	atttatgagt	aaatattaca	actcagaaaa	ttttaacaca	840
cacactataa	taggaataat	attaaccacc	tcgggggtcct	gtttatatac	gtgttgtagt	900
gaatattcaa	agaaaaggaa	aataacgagc	aaataa			936

&lt;210&gt; 317

&lt;211&gt; 5535

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 317

atgaatacac	ataaaaaataa	tgaccgtttt	gatgaatatt	ctttgaataa	taattcaaatt	60
ttgaatgcat	acgtaaacat	gtcgaatgag	gctcacaata	attttttagt	aaatagaagg	120
aatgatatga	attatgaaat	gtataattct	attaattctg	gacacatgtc	taatataaat	180
aataatacaa	ataatttaca	agatgcttat	ataaataaag	aattacatta	tatgaatagt	240
gataaaaataa	atatagcgaa	aaatcatcag	aatgttcata	tgacggcaac	atataataat	300
atggataaaa	ataacgcgaa	taataatatc	atacatttaa	ataatcatat	aaatgatgaca	360
gatgatcaaa	actattttta	taattcaaca	acaaataata	aaatgaataa	tacattaaag	420
gaaaataact	ttaataataa	tatgaatact	gtaaataaatt	ctttttatca	taacaccgat	480
aataactttcc	ttaacttcac	aagaaatcaa	aacgaacaag	atacatatgt	aaataataat	540
atcattaata	acttcaacaa	tcaaaatgta	gataaaaaaca	ttaacaataa	taataataat	600
cctaacaaaa	atgtagaatc	tataaataaa	tttaaccata	tatacaacat	gcaaaacttt	660
aatcattttca	ttcctaatat	aagtaatgga	aaaaatggga	acctggaaaa	caacgcaagc	720
ttatcccata	atgtaaatag	tgtaagtact	ataagtgaat	tgcataattt	taatttatatg	780
aataatatgg	acttgaataa	tgtggatatg	aataatatga	acatgaataa	tatgaacatg	840
aataatatga	acatgaataa	tatgaacatg	aataatatgg	atatgaataa	tgtgaacatg	900
aataatatga	acatgaataa	tatggacgtg	aatagtatga	acatgaataa	tatggacaac	960
atgaataata	tgaacatgaa	taatatggac	gtgaataata	tgaacatgaa	taatatggac	1020
gtgaataata	tggacaacat	gaataatatg	gacaacatga	acaatatgaa	aaatttatca	1080
aatttttaaca	atccatatca	atataacagt	attcctcaat	ttaatagttc	atcacgtttt	1140
aataatataa	ctcattttta	taatgggata	tcccacaatg	ttaataatgt	gtcgaatttt	1200
agtaacaacg	cgcattttaga	caattcaaatt	aatatgaata	gattaaatgc	ggtgaataat	1260
ttcggtgaca	ttaattcttt	tcatgatcca	ttgaatgaaa	tgcaagtatt	aaataaaaaat	1320
gtaaatatgc	agaacgaaaa	ccatttttaat	gttatgaatg	atgagatgaa	aaattataac	1380
aacgtaaaagc	gtattaatatg	tatatcacat	attccctata	tgaataattt	gaaaaattat	1440

aatgagcata	cgagtatggt	gaaaggaaag	ggaaatacga	atagaaaaaa	aagtaataac	1500
ttaaaaaatta	ataataatcc	cgggagtggt	aatgctcgag	cgatatctga	aaataatcag	1560
agcactgcgc	atggtaatat	tcccatggga	agtgttgata	aggtgattaa	acatgatcgt	1620
atggataatg	atctgaaaaa	tattaacaat	atgaataata	tgaatagtat	gaataatatg	1680
aatagtatga	ataatatgaa	caatatgatt	aatatgaata	atatgaataa	tatgaacaat	1740
atgattaata	tgaataatat	gaacaatatg	aacaatatga	ataatatgag	caatatgaac	1800
aatacaagta	ttttaaataa	taataataag	aagattacta	aaagagggaag	ggccaagaaa	1860
aatactacca	ttaatatataa	taatattaat	aaaatgaata	gcacgaataa	caagagtagt	1920
atgatcaata	tgaatagtgt	gaacaatatg	aatagtgtga	acaatatgaa	tagtgtgaaa	1980
aatatgaata	gtgtgaacaa	tatgaatagt	gtgaataata	taaataatgt	gaacaatata	2040
aataatgtga	ataatatataa	taatgtgaat	aataataata	atgtgaataa	tataaataat	2100
gtgaataata	taaataatgt	gaacaacata	aataatgtga	acaatatgaa	taatatgttt	2160
aatgtaaacc	cccaattgaa	tatcatgggt	ataatgaaag	atataaataa	caataatata	2220
acggttagta	ataaaaaataa	gcttatgaat	aattatatta	atgataataa	tataatgaat	2280
atggaaggta	gcataaatga	aacatataat	tttgatggta	cattaaataa	taaaaatgtt	2340
tccaataata	ataataatga	tattcatgat	aaaggtgttt	taaatacctt	gaatagaagt	2400
aaaagttagtt	cgtatatataa	acgtcacaga	actcttacat	taccaattaa	tatgtacatg	2460
aataatcacat	atatgtataa	ttcaaaagcg	tatgtgaatt	acgaaaatca	aaattggatg	2520
gcacaacaag	attgtaatga	taaaaacggc	ttatcattaa	atgaaggtcc	aagggtataat	2580
gataataata	ataataacaa	taataataac	aacaacaata	ataataacaa	caataataat	2640
aacaacaaca	acaataataa	taataataat	aatcacagta	ttattaataa	taataattact	2700
cagggtatatac	atcgtggaag	tatgataaat	aatcaacatt	ttgatgaact	gtcttataac	2760
cctaattggta	tttttcttga	aaaaaataca	attacaaatt	ataatgaaat	gttaggatca	2820
ggatataata	atatgtatga	taaaaatgct	gtaaaaggta	atatgaatct	tatcggcaaa	2880
catagtaatt	atgacttaat	gaagaatggt	aatatgataa	atggatataa	attaaatatg	2940
caagaagtc	aaaaaggtat	gaatgaggtg	gggaaaaaaa	gagcacctcg	taggagagcg	3000
aaaacaatta	atttaaaaaag	tataaacctg	tttaacactg	tttcgttagg	tttgaaggga	3060
aatcataata	tggaaaatat	gaacaatatg	gacaatatgg	acaatatgaa	taatatgatt	3120
aatgtgagta	acgtgaacaa	tgtgaacaat	atgaacaatg	tgaacaatgt	gaacaatatg	3180
aacaatgtga	acaatatgaa	caatgtgaac	aatatgaaca	atgtgaacag	tgtgaacaat	3240
atgaataata	cgaacaatat	gaacaatatg	aacaatgtga	acagtgtgaa	caatatgaat	3300
aatacgaaca	atatgaacaa	tatgaataat	acgaacaaca	tgaacaacat	gaaccgtatg	3360
aaccatatag	ataacaatat	ggttaccaac	ttgaattata	tggataataa	gattaacaat	3420
gcaggtaata	atttgaatgg	tgaattttca	agcgaatttt	tataataaccg	tataaagagt	3480
actgaaaaata	taaaagagat	gatgcaacct	cataatgaag	caaataatat	atcaggaaat	3540
aatacaagtg	atagtaataa	tattacccta	aataagaatc	ttgtagaaat	gatttttaaga	3600
aataacaaac	ccagcataga	taaaaatata	catgagagtg	tcaatagatc	atataccagc	3660
ttcctaataga	atattggatc	ctcctattta	aagaaaaaaa	aaactgcaga	aattaaaact	3720
ggggaaaaata	ataccgaaaa	taacaaagggt	atagtaaatg	tgaacagtca	ggtagaagag	3780
aaaggtaaaa	gtgaaaataa	gagcattcta	gagataaaaa	aagaggggaca	aataaaaaat	3840
gtcatatata	ataataataa	taataataat	gaaaaagatc	aaaatgcaga	tcaatatcaa	3900
gatcaataata	aaaatcataa	gcaagaccat	cgtcaagatc	aaaataaaaag	tcataagcaa	3960
gatcaacttc	atgatcaaaa	tcaaaatcaa	ggtcaacttc	atgatcaaaa	tcaaaatcaa	4020
ggtcaacttc	atgatcaaaa	tcaaaatcaa	ggtcaactcc	acgatcaaaa	tataaatcaa	4080
ggtcaacttc	aaaatcaaaa	tcaaaactat	tatcaaaact	attatcaaaa	tcactatcaa	4140
aacgaccatc	aaaacgacca	tcaaaatgac	catcaaaatg	accatcaaaa	ccactatcaa	4200
aacaaccatc	aaaacgacca	tcaaaacgac	catcaaaaacg	atcatcaaaa	cgaccatcaa	4260
aaccactatc	catatcaata	ccaggatcaa	ggagtaagca	aagaaataaa	taataaagaa	4320
atagaagaaa	acataaacia	attaaatgaa	gagtcagatg	aaaataataa	tttggaattt	4380
ttggatgaag	aagaaataac	aaacaaatca	gtaataagca	atacaatgaa	tatggtagaa	4440
ctaaaaaatg	aaaataagaa	tgagatgatg	attaacgata	taaaaaaaga	agaagaaata	4500
tctgcacaaa	tagtagaacc	tgtaaaaaaa	agaggaagaa	aaaaaggaag	caaatttgtc	4560
cacaaaaata	ttactaatga	acacatttta	tctcaattaa	aagaaccaaa	gagaaaagga	4620
agaaaaagta	aaatatggat	acaaccatta	gataattaca	ataaagttga	agataataaa	4680
ttaaaagaat	atacaaataa	tatagacata	agagatgata	ataaagcaaa	tacccaaaat	4740
gaagatgtaa	caacaaataa	tgtaaactaca	ttatgttgta	ataaaaaagc	aaaatatgaa	4800
agcatgaatc	caaatagtat	tcgaaatatg	ttcattttat	taagaaataa	attaagcaat	4860
ttaaagttaa	aaaataccat	gaatagtcac	tcagaaataa	atatgttaat	taacaatttt	4920
atatatatct	taaaaatcat	gaataaacat	aagcaaatgt	tagaaaaat	atataccatc	4980
aattttacaa	atattgtatg	tatatgtgtc	cgaaaatttt	tagaaaaaca	tttcccggtc	5040
ataaaaggat	atagaaataa	atatgaaatt	actgatgatc	tcttcatgca	gggaaatgat	5100
gataatcacc	tgtccaagga	tattaattgt	ataaatggga	atgaggatat	tggttttaaat	5160
gcgagctgtg	aacaaaaacga	agagaatgaa	aatcatgaaa	agagtgtat	gtataattac	5220
aagaatgata	acagtatcac	aaatatggag	aagtctccaa	ataatatcac	tcttgtttcat	5280
aaaaatataa	aggatgaaga	caatttcgaa	acaatatttt	taaaaacacg	tagttctttt	5340
agtagttag	atagtaatat	tattcatatt	gataatacac	aaaattttta	actttccaat	5400
tcttcagaaa	ataaattaaa	ccaatttgaa	aaaaaaaactg	tattattatc	caatgatatt	5460
ttatatgacg	ccaaaaaaga	aatcgaacaa	agttacatga	acagtcagga	aaaagaaaaa	5520
aattacctgc	actag					5535

<210> 318  
 <211> 801  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 318  
 atgtatacat ttgatgatac atcttttttat atattccttt tgaataaaat actactaaga 60  
 agatattttca gcagtgataa cattttttaat aaaaatgtaa aaaatggaca tacccttttg 120  
 ctttataata aaataagaaa taatttagtc ttaaaaaaat atgttagtag tagtattttt 180  
 gatgtattcg ataaaataaa agattctaata aataaagaac atgacgaaac aacagatgaa 240  
 aatataaata aaaaaagaaa accatctaaa aaagtgttaa aacttgtaga tgaattttta 300  
 aatttaacat taatagaagc agctgattta tgtgatttat gtcaagaaaa attagaagga 360  
 aatcaaaaat ttaataattc cttttttatt aatagaaatc cttttcctca tccatctaata 420  
 ttttttggtg ctaatcaaaa tattttccca caacctactg cacagaatgc gatgaatata 480  
 aatacgaatc ttgtaaatga tcatactaca tgtactacag attctacact ttatagttaa 540  
 gaagaaaaat cagaaaaaaa aaaaaatgaa gagaaaaaaa atacgaaaag tacattcaat 600  
 gtaaaaactag aaaaatttga cgtaaaaaat aaaattaata ccattaaaga aataagaaaa 660  
 attactaacg taggattaaa ggaagcgaaa gatatggtag aaagtgtctc cttctacata 720  
 caaaaaagtg taccttctga aaaagccgaa gaaatgaaaa aaagttttga acaactaggt 780  
 gcaacaataa ttttggataa a 801

<210> 319  
 <211> 1284  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 319  
 atggaagacc acgatgctaa tgtagaacaa tggaaaaataa aaagattaat aaagaaaactt 60  
 gagaatgcaa aaggaaatgg aaccagtatg attagtttga taattaaaaa caaagatgaa 120  
 gtttcaagaa ttaacaaaat gcttgctgat gaattgggaa ctgcttcaa tataaaaagc 180  
 agagttaata gacttagtgt tttgtctgcc attacctcaa cacagcaaaa gctaaagctg 240  
 tataacaaga cgcccccaa aggtctagtt gtttattgtg gaacagtgat cacagaagat 300  
 ggaaaggaaa agaaaatgtc cattgatttt gaaccattca ggccaataaa tacgagttta 360  
 tatttatgtg acaataagtt tcacgtagag gcattaaaaag agttattgga aagtgatgac 420  
 aaatttggat ttattatagt agatggtaat ggtgcattat ttggaacaat acaaggaaac 480  
 acaagagaag tgattagaag atttaccgtt gatttaccba aaaagcatgg aagaggaggga 540  
 cagagtgcct tacgttttgc tcgtttaaga ttagaaaaaa gacataacta tgtaagaaaa 600  
 gtagctgaag ttgcaacatc tgtatttata acaaatgaca aggtgaatgt aacaggtatc 660  
 gtgtagcgg gtagtgtcga ttttaaaaaat gatttattaa atagtatat gtttgatcag 720  
 agattatttg caaaagtta taagattgtt gatatacat atgggtggaga taatggattt 780  
 aaccaagcta ttgaattaa ttctgaagct ttacagaatg tgaattttat tcaagagaaa 840  
 aaattaattg gtaattttt tgaagaaata gctcaagata caggtaaaagt tgtatatggt 900  
 atagatgata ctttaaaggc attagaaatt ggagcagtag aattgttaat tttatatgaa 960  
 ggttttagata ttattagatt aactacaaaa aacctgttaa ccaatcaaac caaaactatg 1020  
 catatttcgc catgtgatga aaaacaagaa tcattatata aagaaaaataa tgtggaatta 1080  
 gaagtagtag aaaaaatctc gttaaactgat tgggttattg gtaattataa aaaatttggg 1140  
 gcttcttag attttgtaac aaacaaatca caagaaggcg cacaatttca aaaagggtttt 1200  
 ggaggttttg gtggaatgtt aagggtataaa attgatttaa atctttacga tgaggatggt 1260  
 gaaagtgcag tcgaattatt ttaa 1284

<210> 320  
 <211> 11922  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 320  
 atgaggaagg aatatatatt gaacaagaag gtttatgagc tgctatcaca aggaacgtat 60  
 gagggatatg aagaagaaat aaaaacaatt tttgaaagac gatatatgaa tatcttaagt 120  
 tatttatgtc cacctaataa gagggagttt gaagacgaga tcatatcatt aaaaatacag 180  
 aatatataaa atgaatattt gagtttttagt aattcaacat cttatttttt tggtttttca 240  
 aaagagttaa tttttcattg tttaaagata tatttttacag atataaaaata tgaggagggtt 300  
 gatgttatga aatcatgtaa gcatgtgagt atgatggata gtgaggacac atataataat 360  
 aataataata ataataatga tgatgatgac aaatataata ttgagagtga tgaagaatta 420  
 atagaaagaa taaaaagaa tgcagacgct ttaaataatgg agaaactcca tttattatc 480  
 tgtgatgaat atttttatat atttaagaat atattatatg tattaataaag atgtgaagtg 540  
 ttttattttt atacgaatta taaagttgaa gaattttctt atgagaaaaa ttttttatat 600  
 qatatatttt atatcataga aaagaaaatt aatattcagg atttaattca aatatattat 660

gatacatata	aagatacaaaa	taattattttt	gatttatttaa	aaaatatgga	tatagaaaat	720
atagtatgga	tatatataata	tatttttatta	tttttaata	tacaaatata	ttgtattaat	780
atatttttgt	attttacaatt	acgattaaat	atattatcac	aaagtaatat	aaaatcatat	840
ttacataattt	ttttaactttt	cccaaaaatta	agttttatcga	atacatatat	gaatgaagat	900
ataataacaaa	gtaccttaca	acaaaaagaa	tattctgttaa	ttttttttat	atgttcctta	960
tgtaatatata	ttactttatga	agatatatacat	aaatatgtga	attgtttgttt	atctataaat	1020
ttattttaaat	tattttttttt	cttttaaaaaa	aatctaccata	ccaatgataa	tcgtaattat	1080
tatgagcata	atataaaaaat	gttgtctgga	tcctttacatt	atcttctgga	tatttttaaaa	1140
aatttttattt	ttattaatga	taacttttgtt	tataaaaagga	tattaattca	aattattggag	1200
aattcgttat	gtactttattc	aatccaaccc	gtagattttt	acaatatgtt	atttgatagt	1260
atgggttttg	gtactcctca	ctcgaaaaat	gaaaatgaaa	atgaaaatga	gagattgtat	1320
agaagaaatg	tagaatttaa	tgtatgcggat	atatacaaga	aaaatggtaa	tattaaaaat	1380
gtgaaccatg	gggtgtgatga	acatgatggt	aatgtttagt	actttcaaac	acctaatact	1440
acgaacgatt	ataacaagga	acttcaaaaat	gaagaatata	atttagatgt	ttcaaattta	1500
aataacatgt	ttgaagatga	ggatagatac	aaaacgaatc	aagatgtaaa	tataaatata	1560
aatattttctc	ttgttataaaa	tatgaaaaaa	catattgaac	agaaaagaatt	tttataaagg	1620
aatatttaata	agaatctttt	tttaaatgta	tgtatattac	tttttaaaaa	acagaatttt	1680
cttttatata	ctcatgatata	aaaaaaagaa	tataagaata	taaatacatg	tcttgaatat	1740
ttacaaaacg	ataattacca	atatgacata	tattctttga	aatatttttt	acataattat	1800
gattataaag	aaacagaaat	tattaccaat	tttaaaagaaa	aggaaaaaag	tttatgtcca	1860
ttcataatcag	tcgaaagcaa	aaatatatta	ttagaaatat	catctctttt	tttttctttt	1920
gattatttaa	aagcttatatac	agaagaaaaat	aatattttatg	gtgataataa	taaaaaaaat	1980
tttaaaaatta	ataatatttt	taattattatc	gataaaagaga	agaaaaaaa	tgaaataaaa	2040
aaaaaaaata	ataatgaaat	gaaaaatagaa	agaaagaaag	aaaaaaaataa	taatgaaatg	2100
aagatagaaa	taaataaaga	aaaaaatttt	atagataata	ccatattaca	tccagttatt	2160
ttatacaacg	taaaatagatt	attgtttggat	tttttttatg	ataaaaataag	taaagcatct	2220
atacaaaactt	taataaatatt	taaccacaat	ttattatcaa	tatatagaat	attaaaaaca	2280
tttaataaggta	cgaatacaaaa	tttaataaat	tttaatgaag	ttacaaaaat	tgttgaaaaag	2340
ttagcacaaag	aagaaggaaa	tattacaaaag	aaaaaccata	aaaatataca	tattgggtata	2400
ttagaagata	cattatatta	taaaaataata	tatatatttaa	gaaaaaaa	tataaataaa	2460
gataacaatat	atataaccta	tatagaatat	tattatatcc	tcttagatta	tttttgtaaa	2520
tattttttata	ataatatgga	taattacttt	aaatataaatt	atatgaagaa	aagtactgta	2580
agaaaaaaat	atgttaaaaa	taaaaatata	aatgacacaa	aagggcataa	taaaaataat	2640
aataataata	ataatatata	tgggtgatgat	gatgataata	atatatatgt	tcattgatgat	2700
gatgatataat	attgtcatga	tgtatgtat	atatattgtc	atgatgatga	tgtatgaat	2760
atattttatat	tttttgaaaa	gatagtata	tttttttgta	acattttaca	aataaataaa	2820
tgctttcata	tactttataga	aataaaaatta	aattattatt	tttaagattcc	atacgatata	2880
aagaatacat	ttattaattt	attttacatat	ttattttttt	tttcccttaa	agttcaagaa	2940
ttctcaaggt	ttcaaattat	gatagtacga	tgtttatctt	ttttattaaa	aaaaaaaat	3000
attaataaat	tgaatgctta	catttttctag	ttatttttct	atttagaaaa	tgatcaaaata	3060
aatataaatg	aaaaagggat	ggtacatagg	aagagttcaa	aatatcatag	aaataatcaa	3120
gaagagtatt	caacaataaa	caaaaacgaat	gataaagtgt	ttagtaattt	atatcgatgat	3180
atagaaaaatg	aatatgatga	aaatcattta	gaaagaagaa	aagacagaaa	tgtattttct	3240
tctaatatga	atgatgataa	aaaatataac	aatctatctg	atttttaata	cacaaaagaa	3300
aatatggata	taaaagaaaa	ctttaggatt	gacatatcgt	ttttgaaaaat	attttttttg	3360
cttaatgatg	taagacaaat	caatttaaat	gaatctaattg	gaagggaagga	taagcttgag	3420
agtaaagcaa	agaggcgaat	acaaaaatta	gatgttcata	ggtacacata	taattgaaat	3480
gataataata	aatataatga	tgggaataca	tttttatcat	cacaagatga	ggaaaaatca	3540
aagtcgttttg	attctagtga	ttcttggtcg	gtcgacgaaa	aggaatcatc	aaaagggtta	3600
tatggaaatg	attttgttaa	ttcaagtgtat	cataataata	atagtagtaa	taattagtagt	3660
aataatagta	gtaataatag	tagtaataat	agtagtagtg	gtcgtataata	tagtagtgat	3720
gaagtagtag	tagatcctta	tgattataac	aactattatg	aatgtaaaaga	tagtaacaaa	3780
tttggtgttg	tagtaaatata	tttttatgca	catcttccaa	attttgaaaa	aagttataat	3840
ataaattatg	tagtagaaga	cataagcttt	gatgatatat	ttttaataag	tattatggat	3900
ttgtgggaaa	caaataataa	taataattta	ttaaatttga	ttaatgattt	gctaaaaaatt	3960
tatgaagaag	aaaaaaagaa	gaaaaatata	atttgtacta	gtttactttt	aaaaatattt	4020
aaaaggatta	ttaaaaagaa	aagtaattca	tattttttat	ttaatattta	taaagctttt	4080
gaaaatgata	taaaattaat	atttagacagt	attaatattc	taattaaaaa	atgggttgta	4140
tggactttta	aaaattgtga	taatatattt	aatagagaaa	aaaatattaa	tattaaaaag	4200
ttgggttaaat	tattttttat	ttcattttat	aaatatttaa	aaaattattt	tttcaaaatt	4260
tattatcat	ttttttataa	taatcagata	tataatagaa	agaattacaa	ttttgataat	4320
ttcttttttt	ctattttttc	aaaatatatt	aataaaaatat	ttgtagaaat	ttattcctca	4380
tcattctctt	cgactcttct	gaattcttct	tttgttttta	atgtatccaa	gttttatatg	4440
atgaagatgt	gtatatctat	tatttaataat	atgattgggtg	ttgtgaaata	tataaacttg	4500
gagagagtta	agcaagtttt	ttatgagcat	aatattatga	tggatgtcca	tatgaaaagt	4560
catcttcatc	acgatattga	tgtgtactat	ggtcatgata	attctttata	caacttttat	4620
caaaaaattc	taaaaagtta	cagaggagaa	gaaaaagaca	ccttagatgt	tataaacacc	4680
gaatcagttc	accaaataag	gaatgaagat	gatatagatg	gttctataaa	tagtttagat	4740
gtattttaacg	aaattatgag	aaatattatt	attaatcata	atagtttaat	taaggatcat	4800
aacgatatgt	gtactaaaaa	aaaaagaatt	aatattttcc	aaatatcctc	tcctgcgaca	4860

tctgaacaac	ttatgaataa	tcattacacg	atgaattatt	taacagatgt	aatgttgtta	4920
caaaaggatt	atatatataa	tattgataat	aatatgaatg	aacacaagca	aaatgttttt	4980
aataaaccat	ttgataataa	taataataat	aataataata	ataattttat	gttaaattat	5040
tttaattaca	ttccagagaa	taacaataat	aattatcgca	tggatataaa	aaaaagatac	5100
cctcctgaat	cttatgataa	taattattat	atgtttaata	atattaaaaa	cgaagaagaa	5160
aatatactat	tacaaaataa	tagcatgtca	tcaagtattt	atattgataa	gaaattaatg	5220
aaggatacta	aagaaatgga	accattattt	aataaaacaa	aagatatgaa	aaattataat	5280
gaagaacaaa	aaaataatga	actaatctca	tatccatata	ataatatgtt	acaaaataat	5340
attatttttg	tgaaattcct	tctatataca	caaaattttat	tacaaattat	atttcaaaat	5400
aattatataa	tttttttgag	tgattttcct	tttataaact	ataaaaagaa	agaatacatc	5460
gaggaaaaga	aaaatggaaa	tcaaaatggt	ataaatataa	aggatgaaga	taaacatatt	5520
acaaatataa	aggatggaga	taaacatatt	acaaatataa	aggatggaga	taaaaatatt	5580
acaaatataa	aggatgatga	taaaaatatt	acaaatatga	aaaaaaaaaa	taataaaaaa	5640
tattttaacta	tacttatgta	taattcacaa	gaatgttcat	tttattattc	catatttaat	5700
acattaataa	atgattataa	tttcttatat	tataaggatt	ataagagtag	ctgtttttta	5760
tatgagagtt	taaatacatt	ttttaaaata	aacaatttta	ataatatata	ttttttgtgt	5820
aaatatagta	gtggatattt	acctttggaa	aggatcataa	aactttttat	ggacgttata	5880
tttggtcact	ttattaaatt	tataaatata	aatgaaaaca	taaatgatta	tgaacttttg	5940
gaagtattag	aatataatgg	taataaatgt	tatgagcttt	taaggtttct	attttttttt	6000
attaagcaaa	atgatttaat	aactataaat	atatataaat	atatatttga	tataatcatg	6060
tgtattttgg	agcagtatat	agcacatgtt	aattattata	tatacaaagg	taaagcttgg	6120
gatgtatttt	ttaataagtt	gaaaaatattg	aattttaagtc	tgcattttgt	aaactctata	6180
tatttttaata	tattttgtga	tgatataaat	cgagagatca	aaagagaaaa	tgataataat	6240
aaaagtaatg	ataataataa	taaaaataat	cataataata	ataataataa	aaataatcat	6300
aataataata	ataataaaaa	taatgagaaa	acacaaaacg	ttgatgaaca	aagaagggtcc	6360
agattatgga	atattgtaga	atgcttattt	tataatgtta	taaacaaatt	acatgtaaat	6420
tccataaatt	gtttaaaaaa	aaataaatta	ggatcatata	aatgtgatga	agagtttcca	6480
aaagaattaa	attgtaaaag	atatttttta	aattataata	aagattttta	aaaagaaata	6540
tattattatt	tatacaattt	aaatatagct	agtgaatat	ttgaattaat	tattaaagca	6600
atttatatta	atgaaacgaa	aatatatcct	ttaatcataa	atatttgtaa	tgatagaaat	6660
ataagtaata	tattttttta	tattgattat	gataacctaa	atagtatttt	agaaaaatat	6720
acataatttac	ataaaaagaa	aaaggatcat	attaaaaatt	taaaatattt	attatgtaaa	6780
aataaatcta	tacatatgca	taaatatatc	tcttatatag	atgatgatca	tcttataaat	6840
aatatgttac	atttattaag	aagaaaaaat	atatattata	aatatgtcct	taatattaat	6900
gaatataaca	acttcttaga	taatcacaaa	tgcaaaagaa	aaaggaaaatt	tataaattat	6960
aataatatcc	aaagtagtta	taataataat	tataatatat	ataataatac	aaataatttt	7020
tatgaatatc	atgattatat	tgctataaaa	aatattctac	ataaaaaaat	tgaattatta	7080
gatgatgatt	atatttggtc	aaggatctta	gatacacaat	ctcagaaaaac	gtatggagaa	7140
aaaaactatt	tattcgatgt	aaaaaattat	atttataata	tgaattttat	aaataataat	7200
tatcaagaaa	attccttatat	aatgatgttt	attaacggca	aaaaaaaaaat	gtttacatta	7260
caaatatcag	aatatgataa	acatactaatt	tataatagtt	tatttatgga	ttgtgtacag	7320
aaccatcata	atataaaaaa	aatgaatagt	acaaataata	tgaatcatca	tattaatata	7380
aataataatt	atcttcataa	tcataatttt	atatctaatt	ataattcttt	taatgtacat	7440
gataataaaa	aaatatattc	atataatgaa	aatttgtaaat	cggatgaaat	catgcaaaaa	7500
aaaattgata	tgagtatttg	gaaaaatatc	gatttctattt	tcccagaaac	atttatagat	7560
tctgataaac	aacctgcata	caattttgat	cccatagatt	ctataaaatt	gggttcttct	7620
agatcgaaac	atgaaaaaaa	aaaaaaatat	attc aaatag	ataacccctgt	gaaaaaggaa	7680
tgtctcttgt	taaataataa	ttatgataaa	catgatagca	ttgtttataa	taagtatgat	7740
aatatgtttc	attatgacga	attaccggat	attaataaca	ataataataa	taataataat	7800
gataataata	ataataactg	tgttattgaa	gatattaagg	atatatatga	aaaacgaatg	7860
aacaagaata	caaagaggaa	taaggaaaag	aaagaaaaaa	gaaagtatat	ttttctaaac	7920
aattttaata	ataataaaga	gaaaaagatg	aaaaataatc	agaaaacagt	atatagtaat	7980
aataatatta	tgggggaaga	gttttataac	gaattttatt	tacataaatt	taaaaatgaa	8040
attaaatgca	tgaaatatat	aaaccttaca	caaagtttat	atgatgtaaa	atacagatta	8100
ttgttattgt	tttataaatt	tataataata	cttaaacata	aagaattatt	acagaatgaa	8160
aattatataa	aagaagaaaa	agaattttta	aagaacatc	atataaaaaa	gaatatacct	8220
ttcctttttt	ttatatatga	attaatgata	acctttttta	atacagcaga	aaatataaat	8280
aaaaatacat	attattatgt	attaataata	aatattcttg	taaatttatt	tttatttata	8340
aataaaaagag	attatgatga	tgaaacttgt	atgagtaata	taataaataa	tgataataac	8400
aaaaaaaata	aaaataattt	aattgaaaaa	aaaaatgaaa	tatataatac	caatataaag	8460
tctttaaaaa	atgataaaga	atatatagat	aatcattcaa	attatgctat	gttttattgt	8520
gatttgtttt	gtgatgattt	ttttatatct	aatgggaaaa	aaaataaaga	aatgttgta	8580
tttcatacat	tacataatat	gtcccataaa	gaaatgtcta	aatatgattt	gataggaaaag	8640
aataagtatt	tagaaaatta	tataaacac	ttaatattag	aaaagaaaaa	gaaaataaat	8700
aatttgaatg	tacatatata	taagaaaatg	gataataata	tattatattc	atttataaat	8760
agaataaatg	aaacacgtga	taatacaaaa	aagaagaaca	aattatatat	tagacgttat	8820
tattttaaaa	aatccataaa	atataataat	cattttatata	atatgcctat	ctttttatcc	8880
ttatttctta	gatgtgttac	tatacattta	cattattttta	aattttataa	tagttatata	8940
tattttttta	aacattataa	tatgttacat	ataccacatg	ccgttcttaa	acatttatat	9000
tcaacacatc	attttaatat	aaatcttttt	gttaatatgt	tagaattgtt	ttatgtcttt	9060



atacaaaattt	ataataatta	ttttgtgaagc	ttttgtgata	tatcaagttg	tcgtaataag	9120
catgtccaac	gagatcaaag	atgtctgaac	aataataaaa	ataaatctga	agataatgaa	9180
aaaatatatt	gtactaataa	taatgggtgat	ggatatgatg	atgatggata	tggtgagaag	9240
aatgtatctg	gtatatacaa	agaaaataat	aataaaataa	atgtcaaagg	agatatatat	9300
aattattgata	atataaatgt	atatccttta	aacggaaaac	ttgtaagtat	ttatttaaat	9360
accttaaaaag	aaatattgaa	agaatgttat	gaatgtcatc	taggtcatat	gaaaaataat	9420
gaaaatatgg	agaaatcatt	ttttattgag	cattttattat	tatatTTTTT	atataaccga	9480
attaatacaa	tatatgaatt	gtttttataat	ttttatttta	cttattttaag	aaaaaaagaa	9540
aataataatg	atatattatt	agatattggt	aatgaacata	tatataatct	tataggaaat	9600
aaaaatatatg	atcaataaaa	taaaaataat	aattttctag	acgataaaca	atattattat	9660
ttctatatata	atactttgac	attttataaca	ttaaataaac	aaatatgtat	atatataatc	9720
aaaaaaaaaaaa	tttttaaacaa	actttatttat	ataccttttta	tatatcattc	attatttgac	9780
aaaaataaaaa	atttcacatc	tatatatcat	ataaataata	atcaatatat	aagaaacaaa	9840
gatcatataa	tattctgttc	attaattggt	tttattataa	aactattata	tgtattcgta	9900
aaaaatttta	aacacaaaaa	tgtgaatttt	aataaccatc	aaaataataa	gaacctgaa	9960
aatgttaata	ctaagtggg	acatgtattt	cattcatcct	ttatatcgga	taatcccatat	10020
tatcatgtaa	ccaagcatct	agattatttat	aatgaccata	cctttatgga	gtctatgaaa	10080
gttgcaacca	ataggatttta	tgaaaatcca	tactatagga	attataataa	agaaccgtac	10140
acctctaattg	aacacaaaat	tttaaatagt	aatatggata	ttaacaatag	taatcatttt	10200
ttaagaagta	atgatgaaaa	tgtaaaaaca	aacacaaata	caaatacaaa	tacaaataca	10260
aatacaaaata	caaataaaaa	ttctgatata	gataatcata	atgatgcata	taatcataat	10320
gatgcatata	atcataatga	tgcatataat	cataatgacg	catataatca	tgatgatgca	10380
tataatcata	atgatgcata	taatcataat	gatgcataata	atcataatga	tgcatataat	10440
cataatgatg	catataatca	taatgatgca	gataatcata	atgatacaga	taatcatagt	10500
gataattata	attctcataa	atataaagga	acttataaaa	tttatcgat	tcatgatgag	10560
gaagatatta	ttcaagataa	taattataca	aacgatgatt	atgttaatac	aaattataat	10620
tttcatcaaa	ataataatta	tcaaaacagc	tccaaggata	atagccatac	ttatactagt	10680
tcgggtgatg	ataatttttaa	taatccattt	atatctttta	ataaagaaaa	tatatccaaa	10740
aaaaaaaaaaaa	acaaaaaaac	aaataaaaaat	agagaaagaag	aaaaaaaaaaaa	gaaaaatgaa	10800
attatacata	atgaagtaga	atattttctta	gaagctattt	taaatgttgt	agggaaatta	10860
tcagatcgta	ttaatttttat	atttttaaaa	atcgaaaaaa	ttaattgtct	agctattttt	10920
gaagaatcct	atctatatgt	tgaactacta	acaaaaatat	cttattattg	taatattttat	10980
aatataaata	atttcttaat	atcttttaatg	gataaaaagag	ttgaacatca	tttattttat	11040
ataaatagaa	tattagaaaa	attcattttac	gaaaaagaag	ttattatata	ttcatatagt	11100
cctttatgaaa	ttaatgcatc	aacaaatgta	cctaataatc	aagataaaaa	aaaaaaaaaaaa	11160
aaatcaacaa	aaaatgaact	tacattattt	acacaaagag	tattatataat	atgtttataa	11220
tctattctta	attataatac	aatattattg	aatctttatac	aaactcctta	ttttaaaaaac	11280
tcccattttg	ttatacatct	ttataatttg	atactcaagt	caactagact	cgttacaaat	11340
atcattgagc	atttcggaaa	aaaaaatata	accctaataa	gaacggtaat	aaggatcatt	11400
cgaatttgtgt	tgtccaacga	taacaattta	tatgtacca	tatgccttga	tatttttaaat	11460
acagaaaaag	aaaagaaaaa	agaaaaaata	cattacacca	gaggagtagg	taaatccaat	11520
tttagctatt	atcttagtga	tagcaatata	cgtagtgaag	agtccgctta	tcctggagaa	11580
attattcaat	acaataaatc	aattgatgaa	tatataaata	caaaaagagt	ttataaaaaac	11640
gatcacttat	ttaattttctt	gccagaaatt	atatcattaa	aaacttatta	taatataatta	11700
aaagaaaattt	tagaaagaag	tgcatcttta	ggagcattcg	tcttagataa	gctgaaaaat	11760
tcagacgaag	attcatgttt	aaaacaaata	cttgaagca	atattttttc	ttattttaata	11820
catattaatg	caaccttatt	accatcaaat	atatgtacaa	ataatcttaa	aaaaaaatgt	11880
acactcatat	ataattatgt	tatgaatggt	cataaaaaagt	ga		11922

&lt;210&gt; 321

&lt;211&gt; 6621

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 321

atggaatatt	tagaaagtga	aaaaagtagt	agtgatgata	gaagagaagt	aaataatttc	60
gaaaatgatt	atagtaagga	tagtagtcat	agtaatatta	atagcgatct	agatgttgat	120
aggaaaaaac	atagtataa	tgtttatgaa	gaatctgaac	aagatgggaa	acagacagaa	180
ggaagaaaaa	agattaaagg	attttttcaaa	ttaaaaaaag	gagattcaga	agatgaaaaac	240
aaagaaaaag	aaacaaaaaga	ccatcgtctt	aaagacggag	gagatacttt	tgaagaaaaac	300
ataaatgtat	tgaaaaaaaa	aaaaaaaaaaaa	aaaaatagtg	atactattaa	ttataataaaa	360
aaatatTTTA	ataaaaaataa	acacaatgga	tcttcatcaa	acgaacattc	gtctttattcg	420
gatgaaaatt	ttttcgaaagc	agcaaaaaaga	aataaaaatat	taaatgaaga	aattttataaa	480
aataaagata	atgaagatat	gatgtgtgat	atgtccattt	ttaatgatga	taataatatg	540
gatgattctt	tatttaacaa	aaatgaagat	aataatagat	atgatgaaga	agagatgaag	600
aaatataaaa	ggaaaggtaa	acgttattct	agtgatagtt	ataaagatga	tagtccacaa	660
tatatgtctg	aaagggtattc	ctcggaaaaa	tattcttcag	aaaaatatcc	ctcagaaaaa	720
tattcctcag	aaaaatattc	ttcagagtaat	agaaatcaat	caacgaacct	tttaataaat	780
attaaaaatt	tttgtaatac	atacataata	aataaaaaaga	aggatagaag	tcgagatact	840

tacgaagatg	aagaaagtag	agaagggtgct	tatggagaaa	ataccacgga	agattttaa	900
gaagatacac	aagaagggtca	taaaaataaa	agaaagaaa	tccttatgaa	tatattatat	960
aatgatataa	atataaagaa	aatgatgag	aaagattttt	ttatggatag	aaatttcaaa	1020
gggaaaaaaa	aagaaataga	tataaaaaaa	aatcaacaag	ttatgaaaaa	tatggtgaat	1080
ataaaaaata	atgaaaatat	agatgtttat	aatgataaag	ataattttat	aaacatagat	1140
gataaatgtc	cttcaggata	ttttaaagat	aaaaataaag	aatatgatta	tttagataat	1200
gaaaaacaaa	aaaatgttaa	caaaatgata	catccaaaag	atggtataaa	taataataat	1260
aataatatac	ttttatcaca	aaatagtagt	actatactca	gtcatgtggt	acaagaagat	1320
tatgctgatg	gaataaaaaa	atttaataaa	aatctctttt	ataacaatct	tgaaaatagg	1380
aaattaataa	atataaataa	tatttatgat	aaataaaaaa	ttatattatc	tgaaaataaa	1440
tcagggtgatc	atttaataaa	tgtagaaaaa	aaattaaatg	ttatagaaaa	ctcactatta	1500
tgtatcttcg	atttacaaga	tggtgataat	aataataata	ttaatgatga	tgatgataat	1560
gatgatgatg	gtcatcatga	tgatgggtcat	catgatcatg	ttggtataaa	tatgaaagga	1620
gataaattgg	atataaaaaa	aagattttct	gaattatttg	atgatgcatt	aaatacatta	1680
attgaaaatt	atgaagatgt	aaaaaaaaaa	gaacattctg	aaaatattaa	taaaaagct	1740
caattaaatt	tatcatgcga	ttttaattta	tatttacgaa	tttgtaaagt	agtttttaaa	1800
gatgaaaaac	atatacatat	tagtaataaa	aaaaatatgt	tatattataa	taatatatat	1860
aaaattaatt	atattaaaag	taataataaa	aataaagaca	ttttatataa	tattcactgt	1920
agaaatattc	atttatattt	aatcttatca	tcacacgaag	gtatcgaaag	gaaaaacaa	1980
caaatgcaca	tattaaaaga	taaagataaa	gataaaaaata	aaaataaaga	taaaaataaa	2040
aataaagaaa	atatatttaa	cgaaaatata	agaaaaatatac	aaaagcaaaa	taaaaacaa	2100
aaccaaaatt	ttattgatat	agataatata	tactatacaa	ataaattaag	gaacataaat	2160
aatgttaatg	atatgaacga	tatgtaccat	attcataatg	atgagaatga	tgtgattaat	2220
caaaaacttt	attatgatga	aatagattat	acaaaaaaag	gtatttttaga	taaaatacat	2280
gtgttatggg	tttatgaaaa	aaagaatgaa	gtacattatc	ttcattttata	taatcttaac	2340
aatattaata	gtaagatggt	atctattatt	atagatggat	atcttgaatg	catagatggt	2400
gtatatttaa	ataatttttt	tcctctagaa	agtttttata	attctgttaa	aaattattat	2460
cttatgctta	taacagaaaa	ttcattttat	ttttttaata	tccattttgta	ttttaattgt	2520
gaggaagatt	ataatatatc	agaaaatgaa	aagttgattt	atcaaaaatat	atataccttt	2580
tatttttaata	tttattttatt	cttattattt	aaagtaccta	aagattcgaa	aatgaagttt	2640
gaatatattc	gttcccatga	aaaaagtgaa	agaatatttc	tagttgttaa	tgatggaaat	2700
gtttatgaat	ttattttatga	gaaaaaaaat	ttattttgaac	cattcaatat	atttataaat	2760
attatagtta	attccatatac	ctcttttaatt	aatgtagtta	atgaaaaaat	cttccatcat	2820
tccagaaatt	aatgataga	acatacggcg	aatgatgata	acagtcctt	taattattat	2880
gataatggga	aaagctcaat	taactcatat	aatattttcta	atacgtatcc	agaatatatg	2940
gataataaat	cattttattga	tgaatataat	aaaaatatatt	attgtgatga	tttatcatgat	3000
tatcctataa	aatttttattt	aaaaaaaatt	atcagtagct	atttttattaa	atatttttgc	3060
ttcttttaaaa	ataaagtaaa	aaaaataatt	atagataaatg	aaagatctat	tctatatgta	3120
ttatatgaaa	atagtgaattt	atatgtaaaa	ttgttatcca	atagggtcga	tgtaataaat	3180
aaaaagaaaa	attattttatc	agatactatt	atatttataa	aaggtgagct	aataaaagag	3240
ttgaacaata	tttatttttat	cgacgatatg	aacattttgt	ataatgatat	gtataatatg	3300
aataatatca	ataatatggt	taacatgaat	aatatcaata	atatggttaa	tatgaataat	3360
atgaataata	tgaataatat	ggtcaacatg	cataatatgg	tcaacatgca	taatatgggtc	3420
aacatgcata	atatgcacaa	tatgcacaat	atgcacaata	tacccaatat	gcataacatg	3480
aacagcaaca	ctaataataa	attcggattc	gctcataata	atatagaccc	cacaacattt	3540
cataaattaa	atattatcga	tatacacata	aaccatatac	atgaaagaaa	tataattcttc	3600
ttaaaaattgg	ttgataataa	ttttaacata	tattattttgt	cactcgtaaa	aaatatggat	3660
acgaataatt	ataagcttat	tttaaaagat	tttcaaaact	accctcataa	gaaggggtctc	3720
aaaattaatg	acaagaactc	ggacgttatt	tttacacacc	atttaaaaaa	tctatatatc	3780
atattaaaga	aaaaaaaaactt	aaaaaaaaaaaa	gaacctaaca	aagcagttgt	gcataaggat	3840
gatgcacaag	caaaaaaaaaa	aacattcttc	ttttttaata	aggataaaaat	ggacagccaa	3900
aaaataagaa	aaacgcgatgc	ccacaaacga	cgttcgacca	ttcttaggag	ggatactagt	3960
agacgtgtgag	ataaaaaaac	ccagggaaag	gcaacatata	aatgatgag	taaacagaaa	4020
agaggaaaaa	taagaaaaag	aggagaagaa	gtaggggaag	aagaagaaga	agaagatgaa	4080
gaagaagaag	atgaagaaga	tgaatatgaa	gaagaagatg	aatatgaaca	agaagatgaa	4140
tatgatgaag	aagatgaata	tgacgaagaa	gatgaatatg	atgaagaaga	agaagaagaa	4200
gaagggagaa	gaagaaaaaa	gagctataga	ataaaaaaac	attcaagtaa	taaaaattta	4260
aatgatgatg	aagaaaaaaa	tacttaccaa	gaggaagacc	aagacagtta	tgatgatatt	4320
agtgataatg	ctaattgatta	taataataat	tataataata	attataataa	taattataat	4380
aataattata	ataataatta	tgataataat	tatgataatt	ttaattttga	gcaagataac	4440
gaaagcgaag	aagaaaaagt	gtgctataaa	ttaaaattat	taacatgtgc	agacgatatt	4500
ggaaacacta	atcaaatgtc	aagctcaaat	aaaaacaaat	ttatttttaa	gcaaatatac	4560
gaatattata	ttaatgaaga	aattattggg	gttattttata	aaaaaaaaaa	ttactatttt	4620
catgaattct	tcgaacatac	tgaaaatgat	aatattctta	aagattttta	tgttataataa	4680
atgaaacaag	ataatatatc	caatatcatg	gccagaaatg	aaaaaaatcg	atttcacctg	4740
aacagtcagg	taagaagtga	accaaatttg	agaacaacct	tggttaataa	tttgacgaat	4800
acaaatatga	tgccataata	tatgtccaca	atgagtattc	ccaatatgaa	tgtaaacat	4860
atgaatgtta	accatatgaa	tgtaacaat	atgaatatta	acaatatgaa	tattaacaat	4920
atgaatgttc	ccaataggaa	tatgcccaat	aggaatatc	ccaatatgat	gcattgtggat	4980
agtcaaaata	acctgtacaa	ttcaggttat	aatagcaaac	cgtcaggtaa	tctttatgac	5040



gagcgaaatt	ttatgaatat	gggtgaagtt	cgagataaga	tggagagtat	accttcccttt	5100
tatttatatg	aaaataccgt	gagcgaaat	caggaatatt	atgatttgat	gattataaca	5160
aagaagcata	tatattatat	aagtaagaat	acaaggacac	agaaaataga	aaagatgata	5220
aataattact	taccatataa	gatattcttat	gaaaatcgaa	atatagaaag	tgtggtttta	5280
aaagaaaata	aaataaagga	atatggtaag	aaaaatcaag	aagattttta	taaaagcata	5340
aaacaaaata	tgttaatgaa	aataaataat	gacaagaata	atataatata	aaagcagttg	5400
attaattctg	tatcaggtgg	tatacctatt	gatattcccc	cttctcctac	tagtttaata	5460
aaagaaaaaa	atgagtatga	agaaatatat	gaatattttta	taaatcaaata	aattgaaata	5520
tcttcaacgg	aagaattttt	atattattata	tggagcattt	tattaaacca	tgtgtataaa	5580
tatgaaataa	tgtgttttag	taataattcag	agttctaata	agagggatat	aaagaataag	5640
ttgaatgatg	ataagagtaa	acgaaatatg	gatgcaattc	ataatatgga	taatacaaat	5700
tattataata	gttatgggtat	tccaagaatg	tctatgaata	ttgcaggatc	tagtacagga	5760
caagatcgga	aaaaattatt	tttacaaaac	tttaagaaaa	atgatatgaa	taataataat	5820
aataataata	ataatgatga	tgatgaattg	ttaagccaga	atgaagatga	acaaaatatg	5880
tttgaaaatt	cttatataaa	aaaagactgg	aataattata	ataataataa	taataatgta	5940
gattatgatg	tgctaaataa	gatataataa	agaaccacat	ttaaatttgg	attttagatg	6000
aagagtgcag	attatataat	aaaacaagga	aagctacaaa	aagctatgga	attagaaata	6060
aaaaccagaa	aggttaagg	aataaaccat	ttattttaatg	ataatattat	tgatgattta	6120
gaaaatgaat	taacaaaaag	tggaggaaac	aataaaaaatg	gagattataa	aaataaaaaat	6180
gataatgttt	tagataatga	aaatatatta	ttaaatgatg	cagcatattc	taattttatat	6240
aatgcttatc	aaaaaaaattc	atccaaacaa	aaattatttag	aagcagagag	aaataaaaagt	6300
ggaacctttg	catttgagta	tttaacaaat	aaaaattttg	atattgtatt	tttaaaaaat	6360
ttaaaaatgt	ataataattc	attacatatg	ttatcaagag	ggttgtgtgt	gttgcttagt	6420
cgtttgttaa	aacctgtcat	gtttattaat	ttgttttctt	atgaaaaata	tagggacgta	6480
aatgtttttca	agtgttctag	taacgttccc	tataagtcta	gaaaatatat	gaaggatatcc	6540
gaggcttcac	gaggtaaaaa	agaaaaaaa	aaaaaaaaaa	aatatatata	tatatatata	6600
tatatatata	tatatgtgtg	a				6621

&lt;210&gt; 322

&lt;211&gt; 5454

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 322

atgtataaatt	ttcttgtttg	ttttttccac	gcaggagttg	gaatttctat	tatttcaaaa	60
gaaaaaatcg	aagaagacga	agaagaaagc	ttttacaata	tgaaagattt	ttgcattatt	120
cggatgagcg	atttatatgta	ttcaagaagg	aagaggaaaa	ggaatatatt	agaagatgat	180
agtaacatgt	tgatattaac	aggaaacctg	ccttttagatt	tttgtttaaa	tttagtagag	240
aaattaaaaat	gtttaagttt	atgtgttagt	atagttttac	gaagtttaat	aaaaaagaag	300
aatgaatata	caactaagat	aaagaatata	aaagatgtat	cgataataaa	tttatattat	360
gattatacat	taattatgat	aaatgagata	aatgagtttt	attctatatt	aaattttata	420
aacttttagta	ttgaatatat	gttaatatat	tgtataataa	tatgtgatta	ttataaaaaat	480
aaaagtataa	taaaaaaaa	aaatatagga	aataagaaaa	attttatata	tttatctagt	540
acattatttg	atttattaat	taaatgtaat	ttcatgagaa	catattttaag	ttcaacctat	600
cgaaatatat	taaaacaatg	tttattttaat	ataataagat	ccgggaaata	tataacctata	660
gaattttttc	aaggatatat	aatacataag	aatgaatttt	tagcgttggt	tttaacaaaa	720
agaattgaag	aagaagtttt	tttaaaagaaa	aaaatgaaag	taaaagaata	ttatgattat	780
aataataata	aaagcaagac	cgataataat	ttattaacac	atcatcataa	atatggtgat	840
tttatggctt	catccgaaaa	acgagctgaa	cattttataa	atgaaaattt	aaaaaatgct	900
atgataagta	taaataattta	caaattgatt	atttttattat	ataaagctga	ttattatcgt	960
tgtactagta	cattaatatg	tttattttatt	gattcccttt	ataagacatt	aggaggagat	1020
aaacataaga	atttaattct	taaggatgaa	gttattacag	ataactaaaca	aggaaagcat	1080
gatatgaacg	attataatat	gaacaagaaa	aataaacatgg	atataaatat	tactattaat	1140
aataataata	ataataataa	taataaaaata	tataatgata	atacgttgaa	tgcttataac	1200
aattcttata	atattcattc	aaatcatcta	atgaatgaca	aaagaaaaaa	tgctcaagta	1260
ctagaaaaac	acttaaaaaat	gctatgcat	aattttttta	atttagaaga	attttattcg	1320
agtaatatca	taatttaataa	tatggatatt	gaatatactt	atgattattt	tatttttatat	1380
gagaaatggt	ttttacctat	agaaaggata	gtacatgtaa	attatatgaa	atattttatat	1440
aagaataatg	aaaggaaaaa	aaataaaaat	cgtaaatctt	ttataacatt	attagaatat	1500
tctcgagata	taaattttca	ctttttttatt	tttaatttaa	tatttatataa	atgtaaaaaat	1560
gagttttccat	gttcgatatt	tgaattacac	atttctcaat	attttatatt	ctttgtaaaa	1620
ttaaatgaac	ttaatattaa	agatgcttat	atatattatt	tttaataactt	caaatatcaa	1680
gatatgatta	tatatttttc	tagaaaaggca	ttttatccat	gggaaacaaa	tggtgaacaa	1740
caaaaaaaac	aaaccttatc	atataatat	aatgacaaaa	taaaagaaaa	caaaaaaaat	1800
aatagttatt	atgaaatgaa	taataataca	tatatgaatg	aacatggata	tacagattat	1860
gaaaatgaac	gtttaaataa	aaaaaataaa	cgattgaatg	taagaggtcg	taccaataca	1920
ttggatgata	ttattgtaag	tgatcatgga	aatagttatg	ataaatataa	tactagtaaa	1980
cataatagaa	gaaagaatca	tataaatgag	atgaaaaaga	aacagaataa	taaaaaaaa	2040
aacacgttat	ttgtagatgg	aaaagatatg	gaagggaatg	gaaaagaaaa	agaaaaagaa	2100

aataaaaaata	tgaataataa	tatttttttat	aataactcat	atagtaatat	aaataaagt	2160
tcctatagta	atataaataa	tgatatatat	agtgttgata	atatgacatc	tgtaataaat	2220
acaaaatag	tatcaggagt	cccaagctat	gctcatgtac	ttattaataa	acaagtaaat	2280
gaatattatc	aaggcttacc	taattataat	aacatgatga	taaaagggtc	tcattattatt	2340
aacgaattac	caaagaataa	ttatatatat	gaaaataatt	atataaggaca	aaattatctt	2400
atgacaaatc	cattatataa	taaagaaaact	aaagatatatt	tttatacaat	ttataaatat	2460
ttatttataa	ttatttctta	tcctagtttg	aaaaaaagaa	tggaaatttat	tgataaattgt	2520
atgaagacca	aaatattcgt	tattcgtaaa	gtctgcaatt	ttaaaaatag	accattttct	2580
tctaataaaa	aaaataataa	aatgaacaga	gatagtagtt	atgtggacaa	tatctcatcg	2640
tattatgatg	atgataataa	taataataat	aataatatta	atatttttaa	aaaaaaaaaa	2700
aaaaagagag	aagtaggatt	aggaggaatt	agattaagaa	atggtgttga	taataagaga	2760
acccatgatg	atactataga	tgaaaaatat	aagaataata	gaaattattt	atztatgaat	2820
ggtgtggatg	ttttatataa	taaagatcaa	cttggatatt	ataagaatag	tttagatgat	2880
aataataata	ataataataa	ttacaataat	gataatatac	gacgttcgca	tgtgtcatcc	2940
tggtcttatc	gaagagcaca	taataatata	aaatagata	taaaagaagg	aggtagcgat	3000
aatataataa	caagtaatat	aaaaaggaat	aagaagaaaa	taaaaaatat	tgaagaaatt	3060
tttaatatata	atagtatgtt	aaataaagaa	gctttaaaaa	attattatac	agtagataaa	3120
acaatattat	atgatgaatc	ctttagtaaa	ttattaaaag	gtatctttga	gaaaaataaa	3180
tggtttattt	aaataaaaaga	aaattattgg	tctaaacaaa	attcatatta	tttacattta	3240
aaagatatata	aaaagtgtcg	aacatgttta	aattatcaga	gattattatt	tcattgaggtt	3300
attaatttat	ttgtttttta	tggtttataa	ttttgttaatt	gggatgtttt	aaaaaattat	3360
ttcgatatata	taataaatgg	ttctgaagaa	gctattattta	agggttttaga	actttttcta	3420
aatattaata	aggagcaaat	agatgtaatt	agaaaaatcat	ataataatat	gtatgaatac	3480
ttatcgaaaa	gtaaatatga	acatatagat	gatattataa	atgattataa	taacaaaatt	3540
aataatatgg	aacgtaaaaa	aaatattaat	cgtattattg	atattataga	catattttaa	3600
gaatatctat	tattaatata	acaagaaaata	cacacaaaag	aaggattaaa	aatcatata	3660
tatggaaaaa	gtaaaaatatt	atttaaaaaa	ttcttaccat	catttaattt	attaaaaata	3720
ataattttat	gtgataagaa	aaaagaaaaa	attgaaaatt	taaatacaaa	ctgtttttca	3780
acagtaataa	atatgttaag	aaatgatatg	attaaaggaa	gtacatttta	tttttcaaaa	3840
tattcatatt	gttttgaaag	attattagat	tatgctttct	cattaacaat	tacttttgag	3900
aacattaatt	ttattattaa	ttatatagga	gacgttttaa	aattatatga	agttgatttt	3960
aaaaactcct	tatatctttt	agttattata	aaattgcata	aatttataaa	taacttattt	4020
gaaataacaa	aagtaagaga	aatacttaaa	acaaaagtaa	gcataataaa	aaataataaa	4080
tattatgaac	gtattaaatt	attatactct	ctaaaattga	tccctcttat	atatctagac	4140
ccacacatga	atgtttatatt	aataaacgaa	tcatatgaat	acaaaatgaa	tgatgatgat	4200
aaaatcatat	tttcgaagtt	atcaccattt	tctttagtaa	gtaaagtagt	aaaccataaa	4260
ttgcgaagtg	tatatacata	tcattgattac	acggataatt	tggaaaaatga	agaacctata	4320
cataaaaaa	aaacatcgaa	atctatgaat	gatgatacaa	aaagtgttag	tcattatgaa	4380
gagacaaaaa	aaaaaaatga	tgatgatgat	atgtcatatg	attcttcatc	agattatcca	4440
aaagatatat	catatgatac	atctgatggg	tcctatcgtg	ataataataa	caatggaagt	4500
ggtcctaata	atgtgaagca	aatgaaggaa	aagggtatcc	caaaggatc	gaaggaaaaa	4560
gcaaaaaata	aaaaaaaaaa	tgtaaatgta	aatataaata	taataataa	aaatgatgaa	4620
tcttacaata	ttcataataa	aattaagaag	gataatataa	tagctattga	taaggatgat	4680
aggaaaacat	tatattattt	atataatgta	aattattggt	ttaatgatca	aaataataat	4740
aataataata	ataataataa	tatgaataat	tcaaatatat	ttggtaatcc	tcataatcca	4800
gaattggtag	ttttaagtta	taaaaattat	tggttttata	ttgtatggat	ttctaattta	4860
ttattaaatc	ataaaataga	atatgaatca	ttaatatatg	tattatttaa	aatatataat	4920
aatacaaaa	atcaaaaagc	atcattatta	gaagaacatg	aaattaccat	tattttatat	4980
tacttattta	ctatgtggat	taatggagat	aaaaataatt	cttccttttt	cttttataat	5040
gaagaaaaaa	gttatcatga	aaaaaataat	cttggatatt	ttttaaaaga	tacttatgga	5100
aattttacaat	atataaataa	ttatttctta	attacattat	taaaagaatt	attatcaaga	5160
gcagaattct	attttgaata	tacatcagat	gctgcataca	gaaattatga	tattagtgtt	5220
ataattcttg	atttctctat	atatgataat	gaaaaagtta	aaaaatcgtc	agtagatttt	5280
ctaaaaaaat	tctttgataa	tatatacata	acctttaatg	atgttcttat	taaaaatacca	5340
ttcttaaatc	aaattttgga	attccaaaaa	atacacgaat	ttttaaagag	gtttaaaaata	5400
tatctcgatg	aaattatttg	tcgcataacc	ttaaccgagg	gaaactatat	ctaa	5454

&lt;210&gt; 323

&lt;211&gt; 753

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 323

atgaaaaaaa	gtcgtttttt	gctcctttcc	attttctttt	gttttgtaac	aaataataagc	60
ttggagttca	aaagaaaaa	aaaagtagaa	attaattcct	tacaaacaaa	taaaaaataat	120
gataacataa	gagaagaaaa	aattaaagg	gatgtggaat	cacaacctga	tggtgatggg	180
gataacctgc	taattttttc	ttcttcagaa	ggaaactcca	gaaactgttg	gtgccctaga	240
ggatacattt	tgtgcagcga	agaagacgtt	ttagatgtac	aaggcaaaact	gaacgaaatt	300
aaaaataagc	atgaaagaag	tctagtaacc	cctttatgga	tgaagagact	atgtgacaat	360

tcaa	atgatg	taggttttaa	aagtatgtct	gttggttatag	attacgaatt	agcagtatta	420
tgtaa	agacg	gaagtaataa	agattatgct	gattttgaaa	ttattggagc	atctggatat	480
attac	aggag	aagaaatgat	tgaagaacaa	aaaagaaaacc	cttggatatgt	tccacgtaaa	540
tgtact	gttca	ataatTTTTTA	cttgtgtaga	aaagtagaaa	atgataatgt	caattgttca	600
tatact	cctt	ggtcagattg	gagtgccctgt	aaaaataata	cacaaaaaag	atatagaaaa	660
gtacg	ccgat	ccaatcaaaa	taatgaaaat	ttttgtttgt	ggaatgacaa	aattgttccc	720
agaaat	tataa	tggaacaaac	gcgttcacgt	taa			753

&lt;210&gt; 324

&lt;211&gt; 1344

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 324

atggatgagt	ggattgtggt	acaaaaaaaaa	aaatccgac	ttcataaaaa	acaagtcatt	60
gataaattaa	cagtcgaaaa	tgaaaaaaaaa	caaagagaga	aaaaaaacga	aaatgcggaa	120
aataatatat	atgaagaaaa	agaaaaacaac	aaaatacaaa	gtatatataa	taaaaaaaaaa	180
aaaatgaatg	taaaaaatat	atgtaaaaat	atagaaaatg	ttacttgtca	tttggaaaaa	240
aatgaatttt	ttaaaaattt	tacaaacaag	tttaatacaa	taaataaaga	aaatcttaac	300
aaagcgatta	tttcttttagg	tctaggttct	ttaatagata	tgaatttaaa	taacaagaaa	360
gcttgtattt	atcaattttc	atTTTTtatta	ttgttaaaaa	aagtatatga	tataaaacag	420
gtatacatat	acgatccgaa	aatttccggag	gttgatcgga	atgtgtgtga	gtactttaac	480
ataaaaaattt	taatttgcctc	taatgaagag	gaaaacaaaa	aagatgatga	agataataag	540
aatggtgata	ataaaggaga	taattacaat	aaaggagata	attataataa	agaagataat	600
tataataaag	tagataatta	taataaagga	gataattaca	acatagaaga	taattattat	660
aaagaagata	attataataa	agacgataat	tactacaaaag	aagataattt	taataaagac	720
gataatttta	ataaagacga	taattataac	aaagaagata	attacaacta	tcataatttt	780
atgcatacat	taaaacataa	agaacataac	aagtgcacac	ataatcccaa	tgatgttccc	840
ttaccttgta	cagaaaaaat	gaatataatt	aaatTTTcca	gcgttatgga	aaaagtcata	900
ttattttatgc	cacattgcga	tattcattta	tatggagata	ttttatatcc	catttttgtt	960
catgaaaaat	tgTTTTtataa	gaatgtacaa	ttttatttta	atttagaaaa	tacaatatTT	1020
cttggaatt	gttttgacta	ttatagagac	cattcttatt	tatataaacc	ttttggTTta	1080
ccctcttatg	ttattaaaat	gttaaatgca	aatcgTcaaa	aattaaaat	ttcaatacaa	1140
gaaaatcata	tgaacaaaat	attggcacat	tttaaaacat	accattttat	tttttatatc	1200
ctaaatttctg	tacatgaaac	aaaatttctc	attttttctg	atcatgctgg	atcattcaat	1260
gatttgtcaa	ttaccatctt	tcacaagata	gaagataagt	tcaaattctg	gtcacacggt	1320
tatgaatctt	tgaacaatat	gtga				1344

&lt;210&gt; 325

&lt;211&gt; 3675

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 325

atgaaacctg	tacacttcaa	taattcgata	ataaatgagg	ataattttaga	tttactccaa	60
tgtgacgata	aaaaaaaaaga	aggaagtTTT	aatatatTTa	ataataataa	taatcaaata	120
aataatgtga	tatatgataa	aaatgtattt	cctaataatt	atgtacagaa	taaaagtcac	180
ataaattctg	aatacgtaaa	taatatggat	tatttatcct	tacatacagg	gatagaaaaa	240
tataaataca	gaaaaaataa	taataatgtc	aaaaatatga	ttttaaaaga	tgaagatat	300
ttatatgatt	ataatattca	tctatcaaat	catttaatta	accatgatat	caattttata	360
tattcttcaa	ataatatatt	taacttatgt	aataataaaa	atccaaaata	ttttccaaat	420
tcaaagaatt	ctaataaaaat	taagaaggat	cataaaaaaca	aagtaaatgt	atatacaaat	480
aatatacact	atcatacaaa	aaaaaataaa	aactttttatt	ctaataccaac	tgaagttaat	540
tataattcac	ttctatctaa	taatttaaaa	cataattctc	tatattattc	tttttagaaaa	600
gatacatcta	attttaattt	ttcatgtgac	aaaaataata	ctactttttc	taaaccaaaat	660
tgcttacatg	aatctaatacc	tagtttctact	tcaacatggt	atccaaatgt	taatactatt	720
cctcttgcaa	ttaatctttt	aaataatgta	aatgatgaca	tttccaccaat	ttatcctctt	780
cctctatctg	aatcttctgt	tacatctgct	tctacatctg	catctgcctc	tacatctgct	840
tctacttctg	catctacctc	tgtgtccact	tcggtatcta	cctccgtttc	tacatctgct	900
tctaccacta	tgaactcccc	tcgtcctagt	gataatcaca	taagcaactc	tttcccttta	960
tcgctgtaat	ccagagctac	agaacaagtg	aatagattgt	attttcctgt	gaatgatggt	1020
acatctaaat	ctgatcccaa	tccaaataat	gaactcacat	ctaacaatgaa	tccaaaacat	1080
gaacccattt	gtgaagaaac	cagaaatgat	aacgggcaca	ttaggaataa	ttctatatac	1140
ccccttagtc	ataaatctag	ttataattatt	actacgaagg	gacatacaaa	tcagtttagag	1200
gatgaaaaat	tgcatagaga	tgataatagc	atgttttgata	aagtgtcata	cgaatggaaa	1260
gatgaagacg	aaaaaaatga	ttgtagaaat	gaatatgatg	aatattttca	aaagaaaaaa	1320
aaatataatt	atttattacc	aaaagaaaaat	gaaaagagaca	agagtacaaa	aggaaaaata	1380
agagaatttat	ataataaactt	taaaaaatata	ttaaaataaat	tatgtcatga	aatatttttt	1440

aattctttttc	agaccatggt	ttcttattttt	attactacgt	cttttttttat	aataactaat	1500
ttatatgtta	gcaatgtatg	cacatatcaa	gaaatagctg	gttttggtgt	ttctataagt	1560
attataacaa	tattgaattg	tatagtagat	ggtgtattaa	atagtttaga	ttatttttgt	1620
agtcattcta	taggtatagg	taatatggat	aaagcatggt	tatatttgaa	ttgtgcatat	1680
tatttctttt	ataaattata	ttttctctct	ttgttttttt	tctttttgtt	taaatgggta	1740
acatttaaaa	tcattagaaa	tatttttgta	gctcatatga	tgaatgaata	tcttatgatg	1800
ataaaagtat	ttttttcaac	agtacaaata	ttattgggtat	gttactttcc	atattttata	1860
tatgaaacca	tgagaagatt	tcttatatta	tataataata	tatatccaag	tataataaca	1920
tctatcatat	cagtaaatatg	cttaaatatt	ttttgttaca	tatttataat	aaaaatatct	1980
atgctttata	cgggagcacc	catagcttta	ttgtttacaa	atataattaa	catgtgtatg	2040
attatgtatt	tcttaaaagc	atttatatat	cgggtgtgtg	ttcgtcctac	aaatattatt	2100
tcttccttaa	gggatggaga	agaattcatg	tcttgtgagt	ccataacctat	ggacaggcaa	2160
catttgactg	gtaacaatct	ttataaaaaat	ataaataatg	gagataggaa	tgatgggggt	2220
catggacatg	tatgtgcaga	agaaaagttgt	gtgtatgaag	atttctcaag	tcctaacgag	2280
gataatttgg	aaaggggaaca	aaataaaatt	aatgataata	attgtgatga	aaaaataaat	2340
aatgtgtgat	aaaaaaataa	tagttgtgat	gaaaaaaata	atagttgtga	tgaaaaaaat	2400
aatagttgtg	atgaaaaaaa	taataattgt	gataaaacca	aatggacgtg	tcacaagcta	2460
cttgaagata	attattacaa	aaaatataac	gtttctattc	cacatcggtt	taatagcatg	2520
gatagtgttc	ttgattttta	tgatgactat	gattattatc	ataacatgga	tacatataat	2580
tattttaatg	ataaatgtaa	aaataattgt	aaaaaatgtt	gcaagaaagt	taaagtaagg	2640
aaatcacaaa	gggaaaataa	aaagaacatt	actaaatata	ttaataacaa	caaaaatttt	2700
ggtaagaata	aaaatttatg	taagaataaa	aattatggta	agaataaaaa	ttatgggtaag	2760
aataaaaaatt	atggtaagaa	taaaaattat	ggtaacaaca	aaaattatgg	taacaacaat	2820
tcccatgtct	tcataaaaaa	taaagaaatg	tataactttc	tatttttatt	ttttaatatt	2880
ccatcggtag	agacaagaaa	caaatttttc	tgtattacca	agactaatat	aaaaaatata	2940
ttttttgaga	tattatcatt	tgaattacag	ttgtttgaat	ccacatattt	atgtctaaca	3000
tctgtcgtcg	cttatgttca	gataaataat	tttttaaact	tggtatatta	tttatcaaat	3060
tcttatggta	ttatattagc	aaaactttat	gggtgtgaca	taagttcaca	aaggaaaagg	3120
gaaaaagata	atcaaaaata	aaaatataat	gaatataatt	taaaagaacc	aatgaaagaa	3180
tatacaaaac	tatttgttga	aaaaaatgaa	gaagtgaatg	atattaaaaa	taaaagaac	3240
tttagtttga	ccgaaatttg	tttagccttc	tttctattat	tatccttttt	atatacttgt	3300
ttaacagtat	tatatgtata	tcataaaaaat	attataattt	tctttttatac	agatatgaaa	3360
ttacaaaacc	aactaataaa	catttttcaac	atactaaatt	tagaattata	ttttgaggcc	3420
ttagcatctt	tattaaacag	tgtaattaaa	ggataaagtt	tacaaaatga	aataacatct	3480
tttacatttt	tcaattttat	gtttttgatg	aacatacttg	gattattttt	atccttcttt	3540
ttaaaatggg	agtttatatg	atttatttat	tcaaatttta	tatgtatgat	tctacaagta	3600
tttatattta	taatatctct	tacaaacaaa	ttttacataa	aaaataccca	caaggaacaa	3660
atattcagtt	attaa					3675

&lt;210&gt; 326

&lt;211&gt; 1098

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 326

atgagtgaac	aaggaaatct	aagtagtcat	aatatgaaat	ctaaaatgga	tagaaatgat	60
tctgataaag	taaaatgtaa	aaaccaagaa	ggtattaatg	aatgtgtcaa	taaagaaaac	120
acacaagaag	aaaatcaaaa	catacatgat	gaaaaaaaaa	aatcatgtga	acaaaacaga	180
aataatataa	ctcttgatga	tgatgtaaat	ataaacaaga	ttgtagaaaag	aatgtcagtg	240
gaagagcctg	aagtattaac	aaaaatattc	aatttgatga	aaaataataa	ctgtttaaat	300
ttttatccgt	tgcttacacc	ttatcataat	atagaaaaaa	ttgtagatat	attaatgcaa	360
gaaaattatg	aatatgaaaa	tacgtggact	gtacattgtg	atgctagttt	tatttgtaga	420
ttatttatatg	aaggttttat	acctgtggct	agtaaacaaa	agttatacaa	aatagaaaac	480
tatgaaaccg	ttatgtataa	agaatgttta	ttaattccta	aaatacattt	tattagatca	540
tgtatgcata	caagtgaat	acatatatca	aaaaaagtaa	aaaaaaaatg	caaacatttt	600
tatataacta	ttgataaaaa	ttttgaaggg	gttatggaag	gaatagtaga	aaaacatgga	660
caaaattggg	tatacccatt	tgtacaagaa	gaatttataa	aaatttttta	taaacatgta	720
acataataaa	atgtagaatt	acattcagtt	gaattatggt	ttggaaaaga	attagttgct	780
ggggaaattg	gaaacacagt	aggatccata	tatactagtt	taacaggatt	ccaaagaaaa	840
agttgtgctg	gtactattca	attatgtgca	ctagctaaat	tgtagaagaa	acaaaaattc	900
gaactatggg	atcttggtat	gctcctacca	tataaaaaag	atatagggtc	taaagaaata	960
actatgaaag	aattcttttag	aaaacatcga	ttattttaa	atcaacctgc	agaattttaa	1020
acacctttca	tggaacaaact	taattgtagt	gttctaataa	aaggtacaga	tcctcaaaca	1080
ttaaaagagc	aagaataa					1098

&lt;210&gt; 327

&lt;211&gt; 501

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 327

atgaaaggaa	gtgattat	aat	tttgcta	aaacaaaag	tggtgaattt	tatttattgg	60
tataatagct	ccagtatagg	tc	atcggaat	ttt	gtgtggg	tatttatagg	120
ggatatatat	atggtac	ctt	agaatataaa	aagaaaataa	gagataaagg	gatatatgga	180
gatttcatat	atg	ttgatga	atacattg	gatgatcaaa	ataaaaaaca	gttcgaaaaa	240
aattataata	aacttaatat	tc	attcattt	aaaaataaag	gatatgaata	tacccaaatg	300
tttaaaagcta	ttaaaaatga	aa	attgtcct	ttaagttacc	tacaattaag	attatggaga	360
aataaaaact	gttatgaaca	at	atgtcaat	aataaaaata	tacaaacttt	attaacaaac	420
ttaaaggata	ctt	gttatatt	ctattctact	caaaaatata	aaactattgt	agatgattcg	480
atagttagac	tc	atcccata	a				501

&lt;210&gt; 328

&lt;211&gt; 987

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 328

atggggaagg	attattattc	aatattaggt	g	ttagtagag	actgtacaac	aatgattta	60
aaaaaagcgt	ataggaagct	agccatgatg	tg	gcacctg	ataaacataa	tgacgagaaa	120
tcaaaaaaag	aagcagaaga	aaaatttaag	a	atattgctg	aagcatatga	tgtttttagca	180
gatgaggaaa	aaaggaaaat	ttatgataca	t	atggagaag	aaggattaaa	aggttcaata	240
ccaacegggtg	gaaatacata	tgtctatagt	g	gtgttgatc	cttcagaatt	atttagtaga	300
atatttgggtt	cggatggaca	at	tttctttt	acctcaactt	ttgatgagga	cttttctccc	360
ttttccactt	ttgtcaacat	gacttctaga	aa	atctagac	catccacaac	aacaaatatt	420
aatacgaaca	attataacaa	accagccaca	t	acgaggtgc	ctctttcttt	atccctagaa	480
gaattgtaca	gtgggtgtaa	gaaaaaatta	aaa	ataacga	gaaagagatt	tatgggtaca	540
aaaagttagt	aagatgataa	ttatgtaaca	a	tcgatgtaa	aggcaggatg	gaaagatggc	600
acaaaaataa	cttttttagg	agaaggggat	c	aattatctc	ctatggcaca	accaggagat	660
ttagtttttta	aagtaaaaaac	caaaacacat	g	atagattcc	taagagacgc	taatcattta	720
atatataaat	gtcctgtacc	tttagataaa	g	ctttaacag	gattccaatt	tattgttaaa	780
tcattagata	atagagatat	taatgtaagg	g	tagatgata	ttgttactcc	taaatcaagg	840
aaaattgtag	caaaagaagg	tatgccttct	t	ccaaatacc	caagcatgaa	aggggatctc	900
attgtagaat	ttgatattgt	ctttccaaaa	a	gtttaacca	gtgaaaaaaa	aaaaattata	960
agagaaacat	tggcaaatac	attctaa					987

&lt;210&gt; 329

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 329

atgtatacac	acttaatctt	ttctgttttt	cccagatttg	ttcatcaaat	atcatcacia	60	
attaaaaaaa	ttataaaaaa	aaactttgaa	tatgccaaag	at	ttttttttg	taaaagatct	120
tatactttatc	aagacttcaa	acaacgttgt	gaatcattaa	gacttttttt	gtattttgga	180	
atagttactt	ttttatcttt	agatctttta	attaatcctt	tacaatcttc	ctactgggat	240	
aaatattcac	cttcacattt	gtccagaaaa	tgtgtagttt	ttttttccaa	caaacaaaat	300	
gatatatatta	gacatgatgg	aaattttattg	tatgaaaaat	atattcaatt	aattaattaa	360	

&lt;210&gt; 330

&lt;211&gt; 963

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 330

atgaaggata	ttttatctaa	ttattcaaac	ctcatatatac	ttaacaaata	tgtgaaagaa	60
aaggataaat	atataaatga	ctatagaatt	atcagaacat	taaatcaagg	caaattcaac	120
aaaaataattt	tgtgtgaaaa	ggataataaa	ttctatgcct	tgaagaaata	tgagaaaagc	180
ttgttagaaa	aaaaaagaga	ttttacaaaa	agtaataatg	acaagatttc	aataaagtcc	240
aagtatgatg	at	ttcaaaaa	tgagctacaa	ataataaacag	atataaaaaa	300
ttaacttg	tg	aaggtatcat	aacaaattat	gatgaggtat	atataatata	360
gaaaacgata	gtatttttaa	attc	gatgaa	tacttttttg	tcttagataa	420
tg	tttttattc	ctatacaagt	tattaaatgt	attataaaaa	gtgtattaaa	480
tatattcaca	atgaaaaaaa	tatttgtcat	agagatgtga	aac	cttcaaa	540
gataaaaatg	gaagagtaaa	attatcagat	tttg	gagaaat	cagaatatat	600
agataaagg	ggtcaagggg	tac	ctatgaa	ctgaattttt	ttcaaatgaa	660

tcattcttata	atggagcaaa	ggtggatata	tggagtttgg	gtatatgtct	ttatgttatg	720
ttttataacg	ttgtaccatt	ttctttgaaa	atatcactgg	ttgagctttt	taataatata	780
agaacaaaga	atatagaata	tcctcttgat	agaaatcatt	ttttatatcc	tttgacaaat	840
aaaaaaagta	cgtgttcaaa	taatttttta	tcaaatgaag	atattgattt	tttaaaattg	900
tttttgagga	aaaatcctgc	tgagcgcata	acatcagagg	atgcttttgg	aacagcaaaa	960
taa						963

&lt;210&gt; 331

&lt;211&gt; 1164

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 331

atgggagcct	ttgaaaatag	ccttaaggac	gccttgaggg	caaaagaatt	agacgaaaat	60
aatttgaaaa	gttattatag	aatatgcgaa	gcgtataaat	cgttgaagga	catagataat	120
tatgaaaagt	atttacaatt	atataatatg	aagaaaaata	aaaaggagaa	taatgaaagt	180
aataaatcga	acattgataa	gaaattatta	actgagaaaa	atagaaaaaa	tgaagagcac	240
aataaaaaata	aaaatattaa	taataattat	tataataatg	attttgaaaa	ggaacaaaat	300
caacaaagaa	aagataaaat	cattactagt	aatgaactta	tagatatttg	tgacaacata	360
gaagaaaaaa	atccttttct	attttttctt	aactcacaat	taaataacac	tataagtaat	420
atacaatttg	aaaaaaaaaa	atataaaaaat	aattttctta	ttgaggaagt	ttatgatttt	480
aagaatttga	aaaaccaaaa	ttcattacaa	tctacaaaca	caaagaaatg	tattgtacat	540
aatgaagaaa	aaataaatta	tcatgatata	tatgatgata	taaaaacatg	tctacatact	600
tttaaacatt	tctttttcga	taatgtacca	aagggttattc	atattgaaaa	agaaaaataa	660
ataaatatgc	aacacacaaa	ttatgatata	cattctatga	aaaatcaagc	tgatcatttt	720
ttttctcaca	agcaatatta	tcgagctctt	aatatgtaca	acgaaataat	ggaaaaaatgc	780
aaaagtgaag	agagtgtttt	ttactgctct	ctcctcagta	atcgtagctc	ctgctttatc	840
aaaatgaaaa	aaattataag	ctccttatgt	gatattcacc	aagcaattaa	aattcttctg	900
ttattacttg	aaaaacatgt	cgaatatata	aagaaagata	acagaacaga	actagaagat	960
aaagatatta	acaaaatggt	tgagagtata	gatatacaaa	catttaaaaa	cattgaagga	1020
atatatatga	aaacgcataa	gctattaata	agactattat	ttagatatgc	tagctattca	1080
tatattaacc	cgaaatattt	taaggctctt	tcattaaatg	aggtaaaaaa	taaaaaatata	1140
tatataagaa	aaataaataa	ataa				1164

&lt;210&gt; 332

&lt;211&gt; 6042

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 332

atggcgaaact	gtagatataa	ctcttcactt	ccttttcatt	ttattagtga	taacatattt	60
tgtttcctaa	aagatgggta	catatgtttt	atgaatttat	taaacaatga	aaaaaaatat	120
cttttatatta	cttggttcaca	agatgaagggt	tatgtagcac	aatattattt	cgatgtagta	180
aaatgtagat	atgaaaaaaa	agaagaggat	tgtaataaaa	atatgacaat	aatataatg	240
ttattacaaa	atgaaaacaa	aaaaattatt	aaagaaacat	gttatataaa	aaatgttgtt	300
acaaataaaa	tatatcatac	tttattctta	gttataaata	aacattatca	taatatatta	360
tgtttccttat	cttttgaaaa	taatagcttc	gaaattctga	acacgaattt	tgttaaaaacg	420
ttcaaaggga	aaataaaatc	tatggcatgt	acaaataata	acatttttgt	cttgataaaa	480
aaaaaaaaaa	aaattataaa	taaaaaataa	ataatacaaa	tgaaaagtaa	aatattaaat	540
caaaatgtcc	tggtatctaa	acacacactt	gatcgctcac	tccttttaat	gaaaggagag	600
aatgatgtta	acgttatatg	tgaatccaag	aaggaaaaaa	aaaaaaaaga	aaaaaaaaca	660
gacaacaaaa	atgagaagaa	aaaggggcac	atggaaataa	aagatgtaaa	tgaaaaaata	720
aatgaaaaaa	taaatgaaga	aaaaaatgaa	aaaataaatg	aagaaaaaaa	tgaagaaaaa	780
aatgaagaaa	aaaatgaaaa	aataaatgaa	gaaaaaaatg	aagaaaaaaa	tgaaaaaata	840
aatgaagaaa	aaaatgaaga	tacaaataaa	gatccatatg	aagaaaaaga	aatgataaat	900
atcccccttag	gtgatcatca	cagtgatcaa	tataacattt	tcacattttc	catattaaat	960
aaaaaagaac	cagattttaa	aaaaatccaa	ttttcaaata	taatattacc	tataaaaaaa	1020
atgataatat	gtccatatga	tgaaaaaata	ataatattgt	tatcacataa	aagtattgta	1080
tatattatta	ccaacaaaaa	caatgatgat	ttaaaaaata	tgtttatcat	aaaagaactt	1140
atttttaata	gtcctattat	tactacaacg	tggtatagata	attacatatt	tttaatttat	1200
tttttaaaaa	acgaattaat	atttttaagt	tttgcaaagc	cttgtagaaa	cctatatattt	1260
tacaaatgta	ttaataacta	ttcacatatt	acatcttttt	tttataaatc	gaggaatttg	1320
tatatatctt	ttaaaacaaa	agaaatcgta	tgttttaaga	tccgttatta	gaaattcccc	1380
ttgactgttt	ttaaaaagat	acaaaccact	gaaggtaatt	atatagatgc	aaaatatttta	1440
ttcagaaaaa	ggcctagata	tataaacaca	aatcataatc	agagtaatgc	aaaagatgat	1500
aaagatggca	atgatgtaat	acgtgaggaa	gaggatttcc	ttaggaataa	taataaaaaat	1560
ttttctgatg	tcaaaaaaag	gaaaaaaaga	aatgataaga	ataactatga	aatcatcttt	1620
aataatatat	taagagaaat	aaaaacatta	gaaaataaga	tatctaacia	tgattataat	1680



atattttatg	aagatggtga	aataaataag	gatgaactaa	aaaataggtt	aagtgcaga	1740
agtttgagtg	tttataataa	atattttaat	ttgaatcttt	taggtcataa	taataataag	1800
aagaaatgga	taagacaaga	tataagaaat	aatatgtatc	ataataaata	taattgtgtt	1860
gaagaagatg	tatgtataaa	tcgttatatt	gaaaaagaat	caatttttta	tgaatatgat	1920
aataataata	atgataatat	gttatgggtcg	cacttctatt	ttttaaaaaa	aaagaaaaaa	1980
aaaaaatttg	ataattttcca	ttataatgat	gagaatgtga	taaaattatt	agatttttga	2040
tctataataa	atttgcataa	atataatttta	aataatataa	ctagttttta	tataatgtct	2100
aaatattttat	ttgtttttact	agataacggt	ttatttatatt	atacgaaaaa	aaatgatgat	2160
ggcaaaatat	atgattttttt	agaatttatct	aattttttata	tatgtttatta	taaaaatata	2220
aataaaatag	tagatataaa	aataataaat	gaacatgata	tatatttatat	ggataagaaa	2280
catatatttaa	aaaatcattc	cttaaaaaaat	aattattttaa	atattataaa	tacaaaagaa	2340
aaaatccaat	catataatat	ctttttccatg	ttagaaaaatt	gtacttgtat	attttttatcg	2400
ttaaatgacg	gatcttttcta	ttttataaac	attacaaaac	ataaaattttt	atttatatgag	2460
aattttacaga	attttagtaa	tttaggacat	aaccaaaatat	attgtaatttt	taaaaaaaac	2520
aaatatatac	aatatagtgt	ttttaataaa	ttgaatgaat	atatattcaa	tggtttacttt	2580
tatgtgcaac	aatatatttat	atttttttttt	ttaatatatt	ctacatccca	taaaaaatttt	2640
tttattttatc	tcgtagaaaa	tatacatata	tatatttttat	ttaaaaaaat	acatcagacg	2700
aatatttttat	ataaaaaataa	agaaaaaaat	caaaatcaaa	atgaaaacat	catcaatatg	2760
aagagacaaa	aggaatcttc	taatttatatt	ttatataaatt	tctactttata	taaaacgctg	2820
aataaggatt	atgtgtgtttt	attatgttca	gataaaagcg	tgtctttattt	ttatatgttc	2880
ttttttgacc	tcccaaggga	agaggaaaatc	aaaatgtata	tatcagacaa	aaagaagaaa	2940
aaaaaaataa	acaatagtaa	tgataacaaa	aatatataat	ataatcgtag	caataaagat	3000
aatgataata	attataagga	gaatcaaaaa	aatgaagttg	aaaattatca	ttatgatgat	3060
gatgatgatg	ataacaaatc	ctatccttta	tatacaagaa	atatttttttt	ctgttcaatc	3120
aaaaatacaa	atatcgttta	tgctaaatgt	atagggaatt	atatgatcgt	tgctgattat	3180
tattttgaaca	ttactttttta	ttatattaaa	gataattttta	ataattatta	tatgtcgtca	3240
ggtgaaactc	cttctttcttt	ttttgtttca	cataaattgg	agaaccttg	tgtttataag	3300
atgaaaaaaa	aaaaagaaaa	acaaaaaatat	acatgtaaca	tgaaagaaga	aagtgaatcc	3360
aaaattgatt	attcaacaaa	tcataaatatg	caaaacatga	tgcaaagatt	tttttttttg	3420
aaaagaaaaa	aattaaaaaa	caaaacagaa	tttaattgata	atatgataaa	agaagacaaa	3480
cttgaagaga	agataaatga	agattttgtc	ataacagaag	aaggagaaaa	aaaaagtaat	3540
aaaaaaataa	aaaataatac	acaacataat	gataataaca	ataataatga	tgtattttatt	3600
tgtaattctt	tatatgaatt	attacttaat	aaagagaaat	cattttttttt	gaatattaaa	3660
catgggaaat	taaaatatat	aaatgaacgt	atgcatacat	cagaattaac	atatattgat	3720
attgtaacaa	caaataatat	attgatattg	atatctttta	attctgttga	ttatcctctt	3780
gaaataaatc	ctcatataaa	tattagatat	atgcctttatc	taaataatga	tatacaatat	3840
tattatcctt	tgatcatcaa	aggtaataac	aactatgaaa	ataataataa	tatgtatgat	3900
ttatttttga	tcaaaaaaaa	aaatttcctt	cttttaagaa	ataatataaa	agaagatgaa	3960
gaagcaatta	tcaaacaaaa	ggaaaaggat	cattctacaa	tatgtaatcc	taaattaata	4020
caaaatcaac	aaaatgatca	aacatataat	acaaaatgtg	ttgaagaaaa	cgtatttaac	4080
gttacaataa	attctaataa	acatatctct	ttttatcttt	ccaaatggat	catagaagat	4140
aataacacat	catattatat	aaatgattct	tgtataaaaa	atatgaatat	tgtctttctt	4200
aaaataaaaa	atgatatatc	acaaaattat	acaaatagga	aaagaaaaaa	cttttttgaa	4260
gatattgtat	gtatggagaa	aaaatatata	gaaaataata	aaaataataa	tgagaagatg	4320
aatatcaagg	tagacatcaa	tattaatatg	aatatgccaa	cacattataa	tattattaaag	4380
aataaaaattt	tattattaaa	tgatgtagaa	aagaccaaat	gtatagaacc	ccaaaataat	4440
aatcataata	ttaataataa	agaaatagaa	ttcaaacaga	tatccaatat	ggataaacta	4500
aatgaagaaa	aaacatatat	attgaaaagat	aaaaattata	ttattcataa	taaaaatact	4560
aattattttt	tcgacaacga	aacaattata	tttactttta	tcaaagataa	ttcttcacaa	4620
aatatatctt	taaaaaaatg	cttgaaaatt	tatcaaaaata	aatatttatct	acaagaaaaa	4680
tatgaaaaaa	aaaaaaaaact	agaaaaaaaa	attacctatc	taagaaaaaca	acttaatgat	4740
ttaataaaaa	caaactatca	aaatgaacag	atgaaaattg	atagatgtac	attttttttt	4800
gataaaaaat	atataaatga	agaagatata	cttattttatg	aatataaaaa	gataaaaaaa	4860
aaatttaaaa	atacaaaaaa	acaaaaaatta	tataattatta	ataaattaca	aaaaaatgt	4920
tctatattaa	ataaaatcga	tttttttatct	gcattcaaaa	aaaatctgta	tgttgtaaat	4980
ttttataata	atcaaaactgg	atataaaattt	tgtaattata	tatcatatcc	atcgaacaaa	5040
tcaaatcatt	tatcgaatga	aaaaagtaat	ttctcatctt	ataataatttt	atcatcttat	5100
aataattttct	catctcatca	taattttatca	tctcatcata	atttatcatc	tcatcataat	5160
ttatcatctc	atcataatttt	atcgtctcat	cataattttat	catctcatca	taattttatca	5220
tcccataata	attttatcatc	tcatcataat	ttatcatccc	ataataatttt	atcatcccat	5280
aataattttgt	cttctttataa	tttatgttca	tctccttata	cagataaaat	caaagtgtta	5340
cgattttttac	aaataaaaaga	atttttttttt	ttacacaaca	ttgataagaa	caatacatta	5400
ttttttctca	aagattacac	tgatttatatt	gatagatatc	ttcaagatttt	ctcgtctctt	5460
tattttttacc	attactatcc	atgtacaaat	attaattttaa	atttttctata	cgcaaacttg	5520
tttaattgtga	atccttttaca	aggagaagta	gatgattttac	gatggaaacta	tctcctctat	5580
tctccgtatg	aactttttcac	aaactctagg	aagagactcc	agtgttacat	tctaaaaata	5640
ttgatagaac	agtttcaaaa	cgatttttgaa	atcctaaaaag	aagaaaaagaa	tcattgcctc	5700
aaggaaataa	acttcttgat	aaataaaactg	aaatcctctt	tacaagacgt	agaaaaatat	5760
atgagctaca	atttttctta	ttatatgaat	atgaaattat	ttataaaaaa	tcaaccatgg	5820
tatgacaaag	ggcgcatata	caatattccg	gacgctataa	aaaaagacct	ttatttaaaa	5880

atacaatttaa	acaaatttaa	catggaaaca	aaaaaagata	taaataaaga	aaatttatatt	5940
ttacaaacaa	aataataatga	acaaaaagaa	aataattaatg	tggatacttc	tacacaatat	6000
tacaatttga	agcacgacat	gaagaacact	ccttccacgt	aa		6042

&lt;210&gt; 333

&lt;211&gt; 465

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 333

atgacttttc	taagtagccc	ttcaacaaat	catatgataa	ctaatttgac	aaaaagaaca	60
aatgaatttc	aatcaaaaaat	agatggcatg	ttaaataaca	taagtacgga	aagtttacct	120
ttccaaaaaa	aatcttttat	gtgttggtgt	aattgttttg	atacgtacaa	cacagatttt	180
gaaacaatat	gaaaatgtgt	aaataactgt	caaaaaggaa	cagagcattt	tggttcagggt	240
gttcaaaatg	aaatgcaaaa	tttacagaat	aattttacaat	catgtcaaca	atcgtgcttt	300
tataagtact	ctccaaatta	tgccaagagc	aatttcaaca	ttgacggtcc	taccatagaa	360
aaagaaatgg	aaacatgtgt	agtaaaatgt	tttgataaac	acgaaccgat	gttaccagaa	420
atatctgaca	gattgcataa	aacgttaaag	gaagaaatga	aataa		465

&lt;210&gt; 334

&lt;211&gt; 2010

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 334

atgatggaaa	ataaagtatg	taattactct	ttaagaagca	ggatagaaag	tattttttaa	60
ggatacaata	atatgattaa	ttcaaatgaa	gagttaatac	aaaatagtga	tggtgaaagg	120
gattgtaata	cagagacttg	tttaataaaa	gagaagtaca	tgaataaaaa	tgaagaatgt	180
attcgtatta	aaagaaaaat	atctaacgat	gataacatgt	ccatttttat	taaagggaaga	240
aaatatttat	ttattgaaaa	ttacacatca	gtgatatatg	aaaaatgtga	agataaattg	300
aacataattt	tggtctaata	atatttagaa	caaggatatca	tagaagttca	attaaaagga	360
aacgttaacat	ttattattcc	ttgttgttta	aataaaaaata	tcttaagttg	ttttttacca	420
caattggaaa	gaggattata	tcattttatt	ttttttttta	ataaagaaag	aatgtttatt	480
aaattgttac	gacctggatc	tgaattaaat	gatgatataa	aatctatacc	ccttcattgt	540
atagaaataa	ctgatttttag	tcattggttta	aaaaaaaata	agattacaga	taaaaataaa	600
gaatatataa	taaatagtac	acataataat	ttttatacaa	ataaagaact	tatcaaatat	660
tataataata	tttacaacaa	ttataataat	atatataatg	atgaatataa	aaaaaataat	720
aaaatttagtc	tacaaaaaaa	tttttatctt	cactataata	atgaagaaca	tttttataac	780
tttcttaatt	cttacaagaa	tcagttttatt	gaccattctt	cttttacaac	aaaaatgaga	840
aattctttatc	aacataataa	ggatatagaa	agagaaaaaa	gagaaaaaaa	ccaaaaaac	900
agtttagata	taaataatat	gaactttatt	tcacaattaa	atctggaaaa	acatgtagca	960
caaagtagaa	tccttatttt	atataaacga	ttattgtatg	ataattgtat	atatgaaaat	1020
aaaatggtta	ttatgcattt	ccacaccaaa	atatttgaat	ataatccttt	caatatctta	1080
tcaacacaca	cttttacaaa	aagtgaataa	gaaaaagatg	gatatatcat	ttttgcattt	1140
aatataatac	ctataacaat	taatacaaac	aaaaataaaa	gtaaatatat	taattcttat	1200
cataatgaag	atattttataa	aaaaaaaaat	attaacaaaa	aaattaatta	ttcatcaaat	1260
attctgaaca	gttcagggtga	aaaaaaaagaa	gaaattggaa	atagctatat	gagtacatta	1320
ttcatttttaa	attcggatga	aagaaattgt	gtagatataa	gattatggaa	atatataaaa	1380
actgttgaat	gtacacaaaa	tgatatatcg	aataattttt	atttatctaa	aaataaattt	1440
aaaaatgtcg	tatgtccaat	atcacctcaa	tttaattata	ataaaaatat	atttaacaga	1500
tattctgaag	ggttaaaaaat	atctgacaag	gtcagcatat	ttttcgaaga	ttggaatgaa	1560
gacatattgc	ctgttcagaa	atttgttaat	tcgtttgaat	atgatatacc	ttataaaaag	1620
ttaaatgaat	tatctaatta	tggtgaggat	ataaatgggg	acattttatt	atataatgat	1680
tttaacgaaa	acgacaaaaa	tgatcatgtg	tgtgacgata	ctataaaaaag	tcaaaatgaa	1740
agtataaatg	gttatcagta	taataataat	gaaagtgagc	ttataacaaa	cacatctatg	1800
aatcaaaaata	atttctacat	taaagatatg	gaaaaaaaata	aaatcaacaa	taaagacaaa	1860
atgaacaaaa	tatcaatgaa	atatctattt	gaaatttttg	tatcctttgt	tttaataatc	1920
gatgaaaaaa	tataccacag	tgttactcct	ataaataaat	ttattttatt	atttataatt	1980
aattattgga	tgaactttgt	ggaaaaataa				2010

&lt;210&gt; 335

&lt;211&gt; 3501

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 335

atgagtgaag	aaagtgcaaa	aagtttgtat	gagaaagaaa	agaaaattca	agccttatca	60
------------	------------	------------	------------	------------	------------	----



aaaatatacc	acataaaaatt	tgaaacgcta	cttattttata	ttattattccc	caaaacaaaca	120
acaaagagct	tatgtttataa	agactttttt	gacgatttaa	tagaaatttaa	gaaatatata	180
aatatagaag	aaaatgatga	atgtgttaag	acgcacgtga	aagtgaatga	ggagatccaa	240
caaagaaaaa	cgaaccatga	taatataaac	aataatgatg	taaatgatga	taatataaat	300
aataatccta	taaatgatga	taatataagc	aataatcata	tagatgatga	taatataaac	360
aataatcata	taaatgatga	taatataaac	aataatgatg	taaatgatga	taatataaat	420
aataatcatt	taaatgatga	taatataaat	aataatcata	taaatgatga	taatataaat	480
aataaccata	taaatgatga	taatataaac	aataaccata	taaatgatga	taatataaat	540
aataattatt	gtaataatga	tgtatatgat	aacatatcaa	atgttcatat	catctgtaat	600
aattctccta	aaaaagaaaa	agaaaaagaa	aatgtagaat	atcaagagat	ccaaggagat	660
aaaaatctct	ttataaagaa	tttattagtt	tttataaata	atttaattat	tttataatttc	720
aaaaatctct	attttaatcga	tgtatgtatt	aatagaagaa	gttataataa	gtgtggtttt	780
tatgcatgcg	ataatacatt	tttaataaat	attaatagaa	gtaaatataa	aatcgataca	840
aaaagtaaaa	gaatatattt	aagggaatat	tatgatttat	tttgctcaac	taattgtatg	900
aactataatc	taggattatt	aaaacttatt	aatcaaaata	ataaaaaata	tacagaagaa	960
attaattata	aaaagaaaatc	gcaatttaatt	catataatgt	ttttaaccctt	ctttccatttc	1020
tttaaatgtg	ataattttaac	cgacctatta	aataatatta	ataaatatga	tatacaatgt	1080
aataaaattt	gtaaaattca	aacaaatata	aacactcaat	ctatagattt	acaacaaaca	1140
gataataata	taataaaaaat	gaataaaaaca	aatgaaagaa	aagaaaccaa	aaaaaaaaaa	1200
atatataacc	atgtttacaaa	tattaaaata	aaagaacatt	atcatgataa	aaaacaagt	1260
ttcatataca	aaaatagtaa	agatacaagt	tatatcgtaa	aaaaaaaaaga	caaatctaaa	1320
tatatattaa	taaataataa	gaataataat	atggaaacaca	aaaaatccat	tctaaaaaat	1380
aagaaagata	atcaagaaaa	tacacaaaaa	actaaactcaa	aaaatgttag	ctttaatcaa	1440
aatatataat	tatatcaata	taataaagat	gatcatgtgg	attcatattc	tatacacgat	1500
acatcagtg	atcttcaaaa	taaagatgaa	agaaaaataa	agaaaaattt	taaagaaaca	1560
acaaaaagga	aaaaaaaaaaa	attctatatg	gaaaaataat	tcaacccttt	taatatagaa	1620
gactataaat	atacaaat	tcatataaat	tataattcga	taaaagaact	taaggaaact	1680
tttgaacgtt	acatatagata	tgataagaaa	tatgaagaac	ataatattca	aatagaagat	1740
aaacttatca	aaagttgtaa	cattataaat	aataataatg	aatccgtgtt	aaataaatgt	1800
gctcatgttc	ttaatctatt	atcagcagat	gaacacagag	gaaagaaaga	agaaaaatgt	1860
gtaacccaaa	taatagaaga	gataaaaaat	gaagaaatgg	aaccaaataca	ggaaatgcaa	1920
caagataaag	ataacgaact	gaaggaaaaa	aatgataagg	aagaaaaaaa	tgatcaggaa	1980
gaaaaaaatg	atcaggaaga	aaaaaatgat	aaggaagaaa	aaaatgataa	ggaagaaaaa	2040
aatgaccagg	aaaaaaaaaaa	tgaccaggaa	gaaaaaaata	atgtacatat	tgataaaca	2100
gaaaaaaatta	acgaaaaatgt	ggaaaaaaaca	ctaaaccttt	atcaaaaata	ttcattatat	2160
aatctatatg	atttatccaa	attagatgag	tcaaaagtgt	tggatttttt	ttatgataat	2220
gaaaaagaaa	attttataaa	ttttgcttcc	caaaaaatga	atgaaattaa	tagaaagcac	2280
aatgatgctg	aaagggggag	gaaaaatacgc	ctgttgaaatt	cgtaactga	tcataagaga	2340
aaagataata	aaatttaacca	aaaaaagaat	gacgagaata	gtacatatgg	tgagaatagt	2400
acatatgggtg	agaatagtac	acatgggtgag	aatagtacac	atggtgagaa	tagtacacat	2460
ggtgagaata	gtacacatgg	tgagaatagt	acacatgggtg	agaatagtac	atatgggtgag	2520
aatgtgtacgt	atgatgagaa	tagtacatat	gatgagaatt	gtacatatga	taagaatcgc	2580
acatatgcgc	agaatcgcac	atatgatgag	aatcgcacat	atgataagaa	tcgcacatat	2640
gacgagaatc	gcacatatga	tgagaatcgc	acatatgatg	ataagtcagt	tgttcatttt	2700
aaggatgaca	taattataaa	tgagggaagaa	tgtgaaaaaa	caaagggaagc	agaccatcgt	2760
gttaatgaag	acacagatga	tataaaaacta	caagctttat	tattggaaaa	aaaagaaaaa	2820
ataagagaag	aatatatata	aacattttaag	agtgaatttt	ccataaatat	gaaattacaa	2880
gataacgata	aacatgaata	tgaaaaattt	aaccatttag	aagatgatga	atcaacatat	2940
gatgatttat	catatgacca	ttttactgat	gacgaattag	aaaataaaaa	ctgtttttct	3000
aataacgttg	taaaaatgaa	tgaaaaataaa	tatatatatg	gtagaaataa	tggaacttgta	3060
tatgaaaatt	tatcattata	tgttgttttg	tggtatatat	ttacaaacaa	catttcaaaa	3120
tatacagttc	atttttttga	aaaaaatgaa	tttattgtac	ctaaagcaat	aaatgaagaa	3180
gaaagaaaaa	gaagaaatga	atttatatac	aatatatctc	aaaatatgcc	tatatattt	3240
aattgtattt	catcgattat	agtgaatata	tgtagaacat	tcttatttca	taaaccctta	3300
attcctttca	aaaaagtatt	ttataaatct	attattttgtg	ttattgccat	ggctattaaa	3360
ttacacaaac	ctcatttaat	cccttcctct	gaaatgccta	atataaaaaa	agcagaagat	3420
tatttaatca	ttgaaaataa	aatagatcag	gaagaattaa	atgaattgtg	tgtgcttttt	3480
tttcaaaaaca	atttttatta	g				3501

&lt;210&gt; 336

&lt;211&gt; 1623

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 336

atggttctat	attgtgtgaa	ctccattttg	aaggatgggtt	atcgatttat	gaaaaataat	60
gaggacacca	ttttgaagaa	catagaagca	tgtaaagaga	tatgtaacat	acttcaaaaa	120
tctctaggac	caaaatgtat	gaataagtta	attattaatc	atatacataa	gaagattgtt	180
tcgagtgatt	gtattactat	attaaatgat	atggaaataa	atcatcctgt	tgtaaatata	240

ttaaagaaat	tatctgaaac	gattaattat	gagtatgggtg	actttacgaa	ttatgcattt	300
accataacat	gtgagatcct	agataaggca	agtttttttaa	tacagcaagg	ttttaatatt	360
aatgatatat	tgaatgggtt	tggttttagga	tataaagaaa	ttgaaaaggt	attagaagaa	420
atgattgtat	ggaagggtcc	taatttttat	gaagaaaaag	aattaataaa	gggttttaaaa	480
tcagtaattgt	taacaaaaaa	cataatcta	aattataatt	ttcttataca	attattagct	540
aaatgtatat	ctacattgat	gccagagaaa	atagaagatt	ttgatgtaga	taatattaga	600
gtttcaaaat	taaagtgggtg	taataataatt	gattctgaa	tcctaatggg	tatgggtcata	660
gcgagagaa	caaatgggtat	aataaaaaaa	aaggaaaatg	ctaagtgtat	cgtactgaat	720
tgtggattag	aaggtcctac	taccgaaaca	aaaggtactg	ttttattaca	taatgctgaa	780
gaattaatta	attatacgaa	aggagaagaa	ttacagatga	aaaaatatat	tgataattttt	840
aaaaaagcca	atgtagatgt	aattattgtt	aatggagcca	tttcagatat	tgctcaacat	900
ttttgtgata	ctaataatat	tatgacatta	aaaattacat	ccaaatttga	aacattaaga	960
atatgtaaac	tattaaatat	ttcttcctta	attaaattaa	gcacaccaca	accagaagat	1020
ataggaaaag	tttcatccat	atacgtctca	gaaattgcaa	gcaaaaaagt	tactattatt	1080
aattcaaaaa	ataaaaaagt	aggtactatt	atactcagag	gagctacatt	taatttggtta	1140
gatgaagtgg	aaagatgtat	acatgatggt	attaattcta	taaaaaatgc	aataaaagga	1200
aacgcctttt	tacatggggg	tggttggtga	gaaatacaat	tatgcttagc	attaaaaaaa	1260
tatgctaacc	aacttaaaag	agtcgataat	tattgtgtta	aaatatttgc	agaagcattc	1320
tatataatac	caaaaatcct	tgacagtaat	gctgggtata	atactacaga	tgtattaaat	1380
gaacttataa	acgaacataa	taaaggtaat	acacattcct	gtattaatat	taataaagac	1440
tcacatatca	cgtctgctca	aaataatcat	atatatgata	attataattg	taaaaaatat	1500
gccatacatc	tagctatgga	agctgtacaa	accatcctaa	aaattgatca	aattattatg	1560
tcaaaacctg	ctggagggtcc	aaaacctcgt	gacaaaaacc	ctgactatga	cgaagccttc	1620
ttaa						1623

&lt;210&gt; 337

&lt;211&gt; 4317

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 337

atggcctttga	aaagtattaa	cataagtgga	aactttgagt	ggtgcccatt	tgaagaatac	60
aagaattatt	tggtatgttt	caactcacac	aatttggtat	attctaataa	taatagtttg	120
aataattata	tataatttat	ggatataaat	ttgaatagtg	agataagaaa	tttgagata	180
gtaaataagt	ataatttcga	agatgcctta	aaatatgata	atgatgtaat	aaaaggagga	240
aataaaaaaga	ataataaaaa	taataaaaaat	aaccataata	ataatagtgt	gaatgaatat	300
gtaacatgtt	ttgaatggat	gaatagtaat	aattttgtag	atataaataa	taatgaagaa	360
ttaagtaaag	gtattattgt	tggtgggttg	acaaatgggtg	atattgtttt	attaaatgca	420
aagaatttat	ttgaaaccaa	tagaaattat	gataatttta	ttttaagtaa	aacaaatatt	480
catgataatg	gtataaattg	tttagaatat	aatagacata	aaaataattt	aattgccact	540
gggtggtaatg	atgggtcaatt	atttattacg	gatatagaaa	atttatattc	cccaacatct	600
tatgatcctt	atctagataa	aaataattta	caaaaaatta	catgtttgaa	ttggaacaaa	660
aaagtttctc	atatttttagc	tacatcatct	aataatggaa	atacgggtat	ctgggattta	720
aaaataaaaa	agtcagctgt	tagtttttaga	gatcctcata	gcagaacaaa	aacatcttct	780
ttatcatggt	tatctaatac	acctacacaa	gttctaattt	catatgatga	tgataaaaaat	840
ccttggtttac	aattgtggga	tctaagaaat	tcaaattatc	caattaagga	aataattgga	900
cattctaagg	gtataaataa	tatatgcttt	agtcctatag	atacgaattt	attattatct	960
tcaggaaaag	atgttaccac	atgttggtac	ctagataata	ataattttga	tatatttaat	1020
gaaatcaata	actcagcaaa	taataattac	tccaagtggg	ctccatata	acctgattta	1080
tttgcatctt	cgacaaatat	ggataccata	caaattaatt	ctataaataa	tggttaataaa	1140
atgacgagta	aatatatacc	caccttttat	aagaaaagaag	caggtatatg	tatagggtttt	1200
ggaggaaaaa	tatgtacctt	tgataatagc	acgaataaca	tgagcaatgt	aaataacatg	1260
aacaatgtga	ataacatgaa	caacattaac	agctttaata	atgataactc	atgtgatgga	1320
gaatacgtat	caaacaaagg	aaaaaataaa	agtacacaaa	aaaaattcct	aataaaatat	1380
catatatatc	caacagatat	ggagcttata	tcagaagcag	ataattttga	aaagtacatt	1440
acaagtggaa	attataaaga	atgttggtga	tctaaaatta	acaaatgtga	tgatgatcat	1500
gagaaactta	catggcaaat	attacaatta	ttatgtacat	ctcaaagagg	tgatatagta	1560
aaatatctag	gtcatgatat	taataatatt	gtggataaaa	ttatgcaaac	tattgggttaa	1620
caacctggat	ttatttttaa	aacttttaac	gacgaaaaag	aaaataataa	taataataat	1680
aataataatt	cgacaaatca	aatgtaccag	aatgatgtat	tattacataa	cgatccaaat	1740
cttatgaata	attattttatt	aaaagataat	atgaatccaa	atataatgtt	gaacaacaat	1800
aataataata	ttataaatag	aacaggcaca	aatgtaatgt	atagtaatgg	acagaatctt	1860
ttgggagaca	caaaccataa	tgaagaaaat	tttaatggga	atgttgatat	agatcctgag	1920
aaatttttta	gagaattagg	tgagaaaaca	gaaaatgaaa	agataaaaca	aaatgaggaa	1980
gacatatcag	gaaatgatga	acacttggtta	aattcgtcca	tgagaaataa	agaaataaaa	2040
acaaagaata	aaaaaagtgg	actaggaaca	gatgataata	atgataatgg	tgatcataat	2100
aaaaatgaag	gtagtaatat	taatggagaa	catgtttctg	aacatatttt	aaatgaaaaa	2160
aataatacga	ataattggaa	tttaggtatt	gaagcaatta	taaaagaatg	tgtattaata	2220
ootaatattg	aaacagctgt	tgaattatgt	ttacataaaa	atagaatggc	tgatgcttta	2280

ttattatctt	catttgggtg	ggaacaattg	tggcataaaa	caaaaacaat	atatataaaa	2340
aagcaaaatg	acaatttttt	aaaaaatatt	aattatgtat	tggatgataa	gctagaaaaa	2400
ttaataaata	atgttgattt	aaattcatgg	gaagaagctt	tatctatatt	atgtacatat	2460
gcaataaata	acccaaattt	taattcatta	tgtgaaatgt	tagcaaaaag	attacaaaaa	2520
gaaaaatttg	atattcgtgc	agcatctata	tgttatttat	gtgcttgtaa	cttttcagaa	2580
accgtggaaa	tttgaataaa	tatgccatcg	aaaaaaacat	ccttattaaa	tgtattacaa	2640
gatattgttg	agaaaatgac	tatattgaaa	atgattataa	aatacgaaaa	ttttaattct	2700
attatgaatc	aaaaaattag	tcaaatatgt	gaattattgg	ctaattctgg	taggttaaaa	2760
gcagccatga	cttttttatg	tttaatacaa	catgatcaaa	gtatagaaag	tttaatatata	2820
agagatcgta	tatataatag	tgcaaatcat	gtatttgtgc	aacaaattaa	accacctata	2880
tcaccattcc	aaatagtgtg	tataaaagcca	tcaccaaatg	tgtatcaaaa	taatatgtat	2940
aataataata	ataataataa	taatatatta	attaatagta	gtagtaataa	taataataat	3000
aataataata	acaagggttt	atcgtccatg	catcatccaa	tgcaacaatt	caatcaatgt	3060
aatgtaaaac	aaatgtatac	atcaacaagt	aattattatta	ataataatac	gatgaattcc	3120
aatttttaaaa	gtgtcatacc	tccaccgtta	cctatgaata	cacaaatgaa	taattccaca	3180
tcttccatac	aaccaccacc	ttcagtagca	ccaaccaa	ttcatacaca	aattattaac	3240
aatacaatga	atagtagatc	atccatcgca	actactacaa	agaattatcc	aacatcta	3300
cttaattcag	taataccaac	atcaatgaat	aatatgaata	caaacatc	acatggaaat	3360
aatgtaaact	ctccatata	gtcccaaaca	aatgtagccg	taccaa	gaataataat	3420
aataataata	ataataccat	gaatccgaca	tatccatctt	taccaa	tcctaattat	3480
aatttaaaat	cacaagtaca	acaaaactcc	ataattcctg	aaaaacaact	aacatcgcca	3540
atgttttctt	cgaattcata	tggaaatata	aataagacac	atactactaa	taatgctgtg	3600
ccacccccac	caaatgttac	ctcttctgtg	gttacacctc	ctatgccatc	caaccaatta	3660
aataatacta	gatccagttt	tgcagatatt	caaaatgttg	tatctccacc	aagaaataaa	3720
aatcaatcca	tatcttcaac	ggcaaatttg	aattatcaac	atgataatca	atttaacaaa	3780
agagaatgta	tggaaacaacc	agtatatcct	atgactaacc	agtcattctat	gttttcgatg	3840
aacaatacta	tgcagaaaaa	aaacgttcct	ggtggattcc	aggacaatac	tagccaaatg	3900
aattatggca	tgcaaccaac	tggttcccc	cctccatcaa	gtataaaat	aataagta	3960
tatctgggat	caaccaccca	atctacagcc	aacgaaaata	aaaaaataca	gacagccacc	4020
aaagaacaaa	acggagtgtt	aatgaataga	aaccatattg	aaaatatcaa	gaaaaccata	4080
agcaatttat	taaataattt	tacgagtcaa	gaatctgtaa	agaaaaaagc	tgatgatgtg	4140
tcttcaaagg	tatacgagtt	atttgaaaaa	ttagattgtg	gtgccttcaa	tgaacaaata	4200
aatgatagtc	tgttaaattt	ggttaattgt	ataaatgcta	atgattttta	aacaaccaat	4260
aaaataatag	tagatctaag	tagaaaacttg	tgggacggca	gcaataaagc	atggttaa	4317

&lt;210&gt; 338

&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 338

atgccaagg	ttgatatttt	ttcagaagaa	catattttcaa	agtgtgcttt	aagcgttttt	60
gataaagaga	aaggtaactg	gttttgaata	gacgctacaa	ataaaaagtgt	aggaagttaa	120
gctgcatgca	ttagtaaaat	attacaagga	aaatatagag	ttgattacaa	tcctaataaa	180
gttaatagta	gtagtgttat	tgttgtaa	gctatacatg	tgaagttaa	tggacataca	240
tgggatacca	aaattttata	attcccaaga	aaaagtcatt	caaaaagtca	taaaatttta	300
tcatgtaaaa	cagtccttgc	tagaaaacca	tccatgattt	taaatctagc	tgtaagaga	360
atgctaccca	ataacagact	taggcaaatc	ttttatagaa	aatttatatg	atatccagga	420
gccctacatc	cacattgggg	tataccacaa	gtttagtagc	caaaaaaaaa	tgtagtcaaa	480
aaggaagagc	agcaagatat	aaagaccttt	accattttgt	aa		522

&lt;210&gt; 339

&lt;211&gt; 7503

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 339

atggatagta	atataaacat	taattatgat	aattatggct	cccagaacca	taatccgttg	60
tccgtagaag	aatacacatt	aagaagtagg	ggcaatatag	atgaacctgg	agtgttatca	120
aatatgaata	gtgtatctaa	tattttctacc	tctactaata	atataggaac	aaacacaatg	180
aatttttaata	attcaaaaagg	ttttattatt	aatccattta	atgaaaatta	taaaaaaaat	240
aatatatgta	cttattttaga	tcatgaaagt	acaaatatta	atggaggggt	aatcagtat	300
gacaatcaca	tggatcagat	gaatcagatg	aatcagacga	atcagatgaa	tcagatgaat	360
cagatgaatc	agacgaatca	gatgaatcag	atgaatcaga	tgaatcagat	gaatcagacg	420
aatcagatga	atcagacgaa	tcagatgaat	caaacgaatc	agatgaatca	gacgaatcag	480
atgaatcaga	cgaatcagat	gaatcagatg	aatattcaac	atcaaaagaaa	tagtgtaaat	540
gctcctaaca	tttatattca	aaattttgat	caaaattgtg	atataatatta	taataacaac	600
qggaaatcaa	acggcaattt	aaatgttcaa	cagtcagaca	acgctcataa	ccctttgatt	660

tatgatatat	ccgaattata	caatcgagaa	aaaaatgaag	aacaaaaaac	aatattttaga	720
gatgaataca	gcaacagaac	tataataaaa	gcattaataa	ataaaaataa	taatacccct	780
atgataaata	atagtgttaa	aaatatagaa	gatactaata	gctcatataa	tacagatgaa	840
aatgtttata	atgtatgctc	tatggatgaa	tacacaacaa	ataaatatat	atccaaaaat	900
tataatgaaa	atgaccaagt	aatagtacaa	ggaaataata	ctgtaccaga	aatgacaat	960
aatgaaatat	ataagaaaga	aaattttatcc	atattttcaag	attcattaaa	ggataaatatt	1020
gtggaataca	atgcatatca	tgattcaaga	catcataaac	caatcgatga	acaagtagca	1080
cattatataa	ataattatta	cacaaataat	aataatgatc	catataatag	aaatagtaca	1140
aataataatg	gcattgcaga	aaataacata	aatgttaaca	gtgcttttaa	tcagtataaa	1200
gaaaataaac	aatattatga	tttatttgaat	acattttacag	gaaatataat	ggaaagaaaa	1260
aacattatga	tgcaaaatgt	ggattataat	gaaagaatca	atggtaattc	tattaatata	1320
caaggatcta	ataaccaaca	aatgaatgat	caattgggtgg	acaataataa	tgtaaatatg	1380
tgctttatgc	agggtcccta	tattaataat	cacaatatga	aaaattttta	tatgggtagc	1440
aactatgggg	gaaataataa	tatgggttcat	aatattatgg	gtactaataa	tatgggttcat	1500
aataatatgg	ttcataataa	tatgggttact	aataatatgg	gtactaataa	tatgggtaat	1560
aataatatag	gtactaataa	tatgggtaat	aataatatgg	gtactaataa	tataggtagc	1620
aataatatgg	ttcataataa	tatgggtaat	aataatatgg	gtactaataa	tatgggttcat	1680
aataatatgg	gtactaataa	tatgggtaat	aataatatgg	gtactaataa	tatgggtaat	1740
aataatatgg	gtactaataa	tatgggtaat	aataatatgg	gtactaataa	tatgggtaat	1800
aataatatgg	gtactaataa	tatgggtaat	aataatatgg	gtactaataa	tatgggtaat	1860
aataatatgg	gtactaataa	tatgggtaat	aataatatgg	gtactaataa	tatgggtaat	1920
aataatatgg	gtactaataa	tatgggtaat	aataatatgg	gtactaataa	tatgggtaat	1980
gataatatgc	gaaataatca	tattatcgat	tataataatca	attatatggg	caataatatg	2040
gtcaataata	tggtcaatac	tatgggtcaat	aatatgggtca	ataatatggg	caatttatatg	2100
gtcaataata	tggtcaataa	tatgggtcaac	aatatgggtca	acaatatggg	caatcataat	2160
atgataaatc	atatgggtaa	tgatcgcata	ggtaattata	atatgggtaa	taatttgaat	2220
agtaataatt	atatgggtaaa	taattattct	aataatacat	atgggaataa	taacaatgat	2280
gttaatagaa	atatgaatta	caattatgct	gggtataatc	atatgtatgc	tagatgtcta	2340
aataataata	atatgaataa	tactccgcaa	tacataatac	cggataataa	aaacaaaatt	2400
tccgctgtac	atccttttac	aaaagaaaca	ataacaggca	tcatattaaa	taatgcatct	2460
caggattata	cattatctag	aagttagga	tataatttaa	atttctctat	gattcaaagc	2520
gaaaatgatt	ttaattctac	tccttcaaat	atagaacctg	taaataatca	acctttaaat	2580
gtcgaacctg	caatttttga	agctgtaaat	cttgaattgt	tcgatgcaga	atctttaaat	2640
gatcaatatg	tatgtgatga	aaattcaaac	acagatgtca	taaaatcgaa	acctttagtt	2700
gataatcctt	tagatgatga	acatatatat	agtgaacatc	tgaataatag	aatttttaac	2760
gacgaaactt	taccttcagc	gcaattaaat	gttgaacagt	tgtatgggtga	acatgaatat	2820
aatgaacaaa	ggatgaatga	acaaaggata	aatgaacaaa	ggatgaatga	gcaaaggatg	2880
aatgaacaat	cgattaatga	agattatata	agtgaagatt	atacaagtga	agaatatata	2940
gatgaagatt	atacaaatat	aaaatatata	tatgcagaat	atataaatgg	acaatatata	3000
aatggacaat	atataaatgg	acaatatata	aatggacaat	atataaatga	acaatatata	3060
agtgaagaat	atacaagtga	agaatatata	agtgaaggat	atacaaatga	aggatatata	3120
aatgaacaat	atataaatgg	acaatatata	aatggacaat	atataaatgg	acaatcgata	3180
gaggatcaat	cgacaaatga	tcaatcgata	gaggatcaat	cgacaaatga	tcaatcgata	3240
gaggatcaat	cgacaaatga	tcaatcgata	gaggatcaat	cgacaaatga	tcaatcgata	3300
aatgaacaat	cgacaaatga	tcaacctcca	aatgaacaac	ctccaaatga	acaacctcca	3360
aatgaagaat	cgacagagga	tcaatgttta	attgataaaa	atgtacgtaa	tgaacaatta	3420
agtgatgcaa	ctttaaatag	atatttttta	gaatgtagtc	agagaaatag	tgaatcttta	3480
tgtaatgaat	ctttaagtga	tccatatatg	aaatagtata	attcacattc	tcaatattca	3540
aatctttatg	aaacagaaaa	cgataattta	agttctgaaa	atccaaatgt	agatgatcta	3600
agtggtcaca	ttcaaaaata	tgataattca	tttaattcct	cttcaagtaa	tgtcccttta	3660
aatgttaatc	ctacaaatat	tgaaaattca	aatattcttc	ctttaagtat	agaaggaca	3720
aatagtgcac	acttaaaattt	tggtcgttct	tattctgatc	catttccttt	tcatagtccc	3780
aatacatcca	ttttagaatt	ttgttgttca	cgatatcttc	cttcaaactt	tccttttgaa	3840
aagacaatga	tacaaaatga	acaagttcaa	gaaagtcttt	atatctccaa	taattttata	3900
aaagcaaatc	atgtagaacg	cataaaaaat	acacacatag	atacttttac	ttctaataat	3960
ctattagtta	aaaatgaaat	cacagacaaa	gaaatcagtg	aaaacaaaaa	tgaaaaaatt	4020
attgaaaatg	aaaaaattat	tgaaaacgaa	aaagtagtta	aaaatgaaaa	tatgggttaa	4080
aacgaaaaag	tagttaaaaa	taaaaatgtg	gttaaaaaatg	aaaatgttgt	tgaaaaaaat	4140
tcacgtttta	ttaaaaaaga	acataacata	agcatgctaa	atgtgccgaa	ctattatgaa	4200
aataatacaa	ggggaaagga	tataacaaat	aataacata	tatcaggaga	tccattagtt	4260
aatggaattt	ctacattgtc	ttataaacct	tatagtactt	ataactgcat	ttccaatata	4320
atagaagaag	aaaaagaaat	aaaaaaattt	gtaaacaaaa	aaaaaaattc	tcttaatcat	4380
ataaatagaa	atgaaaaaat	atatataggt	gataataaga	agaattacat	tattgaaaat	4440
atgtgttaaat	gttttcattt	tcattcatta	ggattaaatg	gtgggtctacc	agaaataaat	4500
gttaataaag	ataaaaaattt	atataataac	ctacatatta	caaattgttt	attatttttaa	4560
aaagagacaa	ccgaagaagt	tttgaaaaaa	tttttgccga	ataacgaaat	aaatcatatg	4620
tcattattat	ataaccatag	cttatatcgt	ttaagaatga	agaacaaaaa	tgaaagacata	4680
atacatgata	aactacacgt	atatcataaa	ttaaaagaat	taataaaaaa	tcaatatataa	4740
gaatattttac	tacataaaac	agtgtaccct	agaaatatat	gtagaaatga	acatatgaat	4800
caaaaagata	attgcacgaa	agatatatat	ataaatgagg	ataataataa	aacagaatta	4860

aacattgaaa	aaatatcaaa	agaaaaataat	gaagaaaata	aaaataactta	tatgaatact	4920
acatcttata	aagaattact	tggaaattat	ataaactttt	tggatacatt	taatttatat	4980
gataatatat	atagcaaaaga	aaaaatagaa	acagatgaaa	atgatctcat	tcttaataat	5040
aaggaaacct	gtatttctta	caattttta	agtaattata	ataatgattt	actaaaatcg	5100
gataatgtat	atgaatatat	atataaagat	atttactatg	atagttatta	tgataaaaaat	5160
acttatatat	actatgataa	taaatatatg	tttcataaaa	caaataagctt	tattaacgat	5220
gaaaacgggt	gctaccatct	tttaactttat	ccattagaag	atgaaataga	aaatatgaat	5280
tattatgaaa	aaaaaaaagg	acacaaaaga	aaaatagcac	ataataaaga	tatgaacgtt	5340
aattttaaaaa	gaaaaaaaat	taaatatgaa	aatgaaaata	ttatttctga	taagttaaat	5400
gttatgaata	cagaatataa	ttatatctcat	aaacatgatg	aaaaagaaaa	aggggtcatgt	5460
atacttaata	aagataataa	gaatcataat	aaattattat	taaaagacaa	aaagatttat	5520
aatgtttaaaa	aaaaatggga	agaatgttta	cctatatcaa	aacgtaaaaa	gttatctaca	5580
caaatacgta	taaaaaaat	aaaaaaaaaac	atgcaaaaaat	catgcaaaat	attaaacatt	5640
aaatataagg	atgtaatat	ttcggaaattt	tttaggttgt	catccaagag	gaaaaaaaat	5700
tgtaatgaat	tattaaatgg	agagaagcat	gtggaaaaaa	ataaaaacaa	tgctttgttg	5760
aacggagggc	atactttcgt	agaagaccaa	aagaagggga	aggaatataa	gaaagaggaa	5820
agggaaacata	tcgtacaagg	ggaataaaaa	gagaaagaaa	aatatacatt	gggaggtaga	5880
gaaagagggt	cacgtagaag	taaagaaagt	gattcattta	gaggtagaga	aaggggttca	5940
cgtagaagta	aagaagtaga	tacattaaaa	ggtagagaac	gagattcatt	aaaaggtaaa	6000
gaaagagatt	cattaaaagg	tagagaacga	gattcattaa	aaggtaaaga	aagagattct	6060
tttagaggta	aagaagagaga	ttcttttaga	ggtaaagaaa	gagaaacatt	aaaaggtaga	6120
gaacgagatt	cattaaaagg	tagagaacga	gattcattaa	aaggtagaga	aagaggttct	6180
tttagaggta	aagaagagaga	ttcttttaga	ggtaaagaaa	gagattcttt	tagaggtaaa	6240
gaaagagatt	cttttagagg	tagaaaaaga	gatacattta	gaagcagaga	caggggttca	6300
tttagaata	aaacaggaga	tgtatataaa	agtcgagata	taaatttata	taaagaagaa	6360
aacaataaaa	aaaaagacca	ttattatgta	gataaatatc	attatataaa	taaatattac	6420
ccagaaaaat	attccagaaa	atttaattat	aaccattcga	gtggttctta	tcataatgca	6480
caaaaaatag	attccttaag	gtatgaacaa	aaagagaaac	catataagat	tacagaaaaat	6540
aataagaaaa	atgagggaaa	cgaaatatta	aaaaaatact	caatagaaaa	tgaagaaaaa	6600
aataattatg	atgaagaaca	aaatgaaaat	tgtatattag	ataaggatac	tcaatgtaat	6660
gtaaatcaaa	aggagaaaaa	taatttagat	aataaaaaat	catttccatc	taatataaaa	6720
gttaagctgg	aagaagaaga	aaaaagcgat	gacaaaaggg	atgataaaaa	gaatgacaat	6780
acaaggggaga	aaaataattt	agataataaa	aaatcatttc	catctaatat	aaaagttaag	6840
ctggaagaag	aagaaaaaag	cgatgacaaa	agggatgata	aaaagaatga	caatacaagg	6900
gagaaaaata	atttagataa	taaaaaatca	tttccatcta	atataaaaag	taagctggaa	6960
gaagaagaaa	aaagcgatga	aaaggggat	gataaaaaaga	atgacaatac	aagggagaaa	7020
aataatttag	ataataaaaa	atcattttcca	tctaataata	aagttaagcg	ggaaaaagaa	7080
gaaaaaagcg	atgaaatgaa	ggatgacaaa	aaggatgata	aaaagaatga	aaatacaagg	7140
gagaaaaata	atttagataa	taaaaaatta	tttccatcta	atataaaaag	taagctggaa	7200
aaagaagaaa	aaagcgatga	aatgaaggat	gacaaaaagg	atgacaaaaa	ggataataaa	7260
aaggatcata	aaaagaatga	caaaaagatt	gacaaaaaga	ttgacaaaaa	gattgacaaa	7320
aagaatgaca	aaaagaatga	taaaaagaat	aacaaaaaga	ataataaaaa	ggttgaaaag	7380
aaaaatgaaa	taaagaatga	taaaaagaat	aacaaaaaga	ataataaaaa	ggttgcaaag	7440
aagaatgaaa	taaagaatga	aataaaagat	gaaataaagg	atgaaaataa	aaaatgtata	7500
ttaa						7503

&lt;210&gt; 340

&lt;211&gt; 1677

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 340

atgaacaaaa	aaaagggttac	gtttaagaat	gatgttacat	acgaaaatgc	agacctgaat	60
gaaaaaacacg	agtatgtaga	gagtcctttt	tttttcaaaa	gagaagaaaa	tgagaatagt	120
tatgaggaag	aagaattaca	agagatgcta	agacatttca	atccttttaga	ttttgggtatt	180
aaagaaaaat	taagtgaag	tgagaaaaaa	attttagtaa	aagaaattat	gggtagaagc	240
aaaaagtgt	ctatgaagaa	taatgatatg	ttaaatgaag	aaaacaaatc	atgtgaaaaa	300
acaaaaagaaa	ggaaaaaaca	agatattttt	atccatgata	atataatata	tatgaatgat	360
aatataaaga	aggaaataaa	agaagaagat	caaaatggaa	gcaatagtaa	agaaaaatgac	420
aaaaaaaaaaa	aaaaaaaaata	aaaaaaaaaaa	ataaataata	atgacaaaaa	aaatgaattg	480
tcataatttag	atggagattg	ttattttcca	aatgatggat	atgattatga	acaacattta	540
aaaccaataa	gtaaaaattt	tatagaaata	aaaaataaaa	gtgaacaaaa	tttttttgaa	600
atacagccaa	ataatgaaga	agaaaaggaa	ttgtttaaaa	catttgatat	ggataattat	660
gaagaattaa	atgataattt	tgtatgtgaa	gctcaaaatg	tagaagaagt	aggagaatta	720
aagggttgata	aaaaattaat	ttggggtaac	gtacagccat	ttttatatat	accagtaaat	780
gatttatatg	atgatgcaga	agatatgggt	aacatggata	atataaatga	taacataaat	840
gataacataa	atgataacat	aaatgataag	ataaatcata	agatatatga	taagatatat	900
gataagataa	atagtgatga	tatatttagt	acagatagcg	atactgataa	ccatataaat	960
aaaaattata	ataaacataa	caacattaat	gaggatcaaa	ttatttttga	tgataaatta	1020

aacgacatag	gtttgcacaa	taatcaagat	atttcaacaa	aaaattatga	cgaaaaagga	1080
acatatgaaa	ataatatgga	cagcataaaa	tttagtgatc	tcgttgaata	tcaatggaga	1140
aataatttga	accctgtgaa	tgatataaaa	aaaattatta	aaaaaaaaaa	aaaagggaaa	1200
aatgtgaaat	tgaaacttga	tgatattatt	gttaatatata	atgatgaaga	caagaaaaaa	1260
attatgcaca	ttgtaaaatt	acaaaatgaa	gaaataagaa	atcaaacaag	atattcatca	1320
aaaggaaacg	ataaaaatgt	tgaaaatgta	aatgtaaatg	caaacgaaaa	tgaaaatgaa	1380
gaagaacaac	aaaaatatga	aggaggagggt	cattattatg	atgatgaaga	ttcctattcc	1440
gaaaacctag	aacattcttc	ttcatcctta	agttatgatt	gtgaaacaat	cttaacaaca	1500
aaaacaaata	caactaacca	tccatataaa	ctaattattc	ccaaacaaat	taaaccaacc	1560
cccctttttac	tcaattcaca	aaaaaaaaaat	gaaaatgaaa	ctaaaaataa	aaataaaaaat	1620
aaaaacgagg	acatcaaatt	ggagcgttat	atgatattag	agaaggtaaa	cacataa	1677

&lt;210&gt; 341

&lt;211&gt; 921

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 341

atgaatctac	taagaagaaa	tatttataac	gtttttatat	taaaaataa	gaaaataaaa	60
ataggttaca	ataataaggt	tcactttttt	tttcacacgt	tggatgagaa	aataaaattcc	120
ataaaagaaa	atgaagaagc	ttataatttt	gaagatacta	ttattagacg	tataaataaa	180
atgaataata	cagcattagt	atttacttgt	gaaaacataa	ataaaaaaaa	aataaataat	240
ccatatatat	gggaattaat	atataataga	ataaatgaaa	tttatcattc	tttttcctta	300
acagaaatta	ttgtcttatt	tcattgcttat	tgtaatagta	tatcttttga	tattaagtca	360
atgaattcat	taattaattt	tctttggaat	atattagaaa	ataaaaaata	tgatgttgaa	420
gatttatctt	ctttactagc	tctatatggt	tgtgctgaaa	aaacaaaaaa	tttaacaaaa	480
cgtgaacata	ttagtaattt	aatattacaa	agatatatta	cattaataga	acaggataaa	540
atttttcata	taaacgaaat	acgattatca	atttttttga	aaatattatg	ttctcataat	600
aagaatataa	tacaagttga	taaaaaatat	attatgcaat	ttagtaatga	catatcaaaa	660
attattataa	gaaacataaa	caccttgatg	ctatgtttac	atttttttat	aaaatatcaa	720
atatatgacg	aaccattcat	tattttatta	aaacaaatac	aaaacttatt	aattttttaa	780
aaagaaataa	acgtaaatgt	tatattaaaa	tatttctctt	ttatttcaaa	tttaagaaat	840
ccttatgcct	tacaagaaat	taaaaatggt	ctgtcaataa	tttatttgtc	aaaatgtgaa	900
attattgggg	cacaaatgtg	a				921

&lt;210&gt; 342

&lt;211&gt; 5145

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 342

atggataaca	atggagtggc	caaaactttg	aaaaaagata	tttcatattt	tgatgaaacg	60
aaagagtatt	caaaaaaaag	gtttgataag	tttaatgata	tatatgaaat	tattactaat	120
cataagaaca	agcaacctca	tataaaagaa	aataatataa	aatatataac	aagaaatgtg	180
aactatgata	gactgtctgt	tgatgagaag	aagaaaaaaa	atgatattaa	caatatagat	240
aagtatgaga	aaacaaagac	ctgttcatac	gtttttaaata	atttacataa	gaaatataat	300
catcataata	ataaaatgta	tgatgaatat	aaattttatg	attattacga	attgattaac	360
aaaataaaga	aattgaaagg	ttttaaaaat	gtaatagagg	aaagaggaaa	gggaaatgat	420
aatagattag	gtgtcagctc	tacaagtaat	gataaaaaaa	aaaataacaa	aaaaagatat	480
aacaataata	ataataatga	taataataat	gatattaata	acgattgtaa	taataataaa	540
tataatcctt	gtttagtag	ttgtaatggt	aatgttttat	cttcttcaaa	aacttttaat	600
atgtgtgaag	gagataagaa	aatttcatat	ggaaggcaaa	taacaaattt	ggtagttgac	660
tataaatata	ataatcaatt	aaaaagccct	tataacatcc	acacgataaa	tcaacagggtc	720
catgataata	atatatatgt	ggacaaccaa	catatgttat	atcataatta	tactgataat	780
ttaaaatata	gtaattataa	taaaatgaat	gatttgtctt	ataatctaca	tgaaaaaaa	840
aatagttttt	ccaattttat	aaatagtggg	ccacgtgata	atcctatgga	gttgtgtata	900
aaattgaaga	aagctgtaga	atataaagag	agggttaattg	atataaataa	agagaaggat	960
tttgttttgc	ttggtatatc	caaaacgtgt	gtaaaaaaaat	gtaatacatg	ttcagggtgat	1020
aatgtgacga	aagatataga	caaatgtggt	gaagatgaag	agaaaagcaa	agaagggtgta	1080
atattaaatt	atatgaaaaa	ggatatatta	ttttataata	cttttaatat	aaataataat	1140
gatccgaata	gaaaagaaaa	accaaaagaa	tgtgataaat	ataataagga	tgatgttcat	1200
gtcctttgtg	atcatgatca	tttttctcac	agtaaaaagt	ctcatacaac	caaaaattca	1260
aacactaaat	tatatatgt	aaaggaaaaa	catatacata	taataaagg	atacaataat	1320
gtatactttg	tggaggggca	agaaaaatta	tattcccctt	ctataaaaaga	ggagacccaa	1380
ttttatatac	aaaatgatta	taaacatgat	gataatgtta	aaatgttatc	atataactat	1440
tataatgata	tggtatataa	aaattcaaaa	ggtagtattg	actctttatc	tacacaacat	1500
gcttttaagg	gagaggaaac	tgtgataaat	ataaataaag	tgcgtagacg	ttttagtata	1560
atgaatagaa	aagtatatag	tgattctgtt	ttatatTTTT	atggagcacc	atggtggcctt	1620



aataaaaatta	gaaggggcca	aaaaataggc	caagaaaaaa	aacacaaaaa	aaaagatgaa	1680
aataaaaaaa	aaaataaaaa	aaataaaaaat	aaaaataata	ataatagtaa	caatattaat	1740
aacaagcatg	gaagagttat	ccaatatact	gatgaaaaaa	tccaaaatga	ttattgttaa	1800
aataaagagt	catcaaaaaag	ggggaatcat	aaaatgatga	ggaaggaaaa	aaacttgaat	1860
tcttcacttt	tatcaattaa	tggcaaatgt	tataataaat	ggaaaaaaa	ttataataaa	1920
acaagaaaaac	ctaaaaaatga	aggtaggaaa	ggagaaaaat	atatttactg	ttatgagaat	1980
attaaaaatat	tagaagatat	aaaagatagg	tttttttaatg	atcataagcg	taataatata	2040
ttaatgaag	agaattttat	taaagagcat	caaattaatg	gtagaaataa	ggaacatgtg	2100
aatgaaaaaa	acaaagaaga	agatactttt	aacataagta	aagagaatac	aaaagaagga	2160
agttacatta	taacacataa	aaataaaaagg	aacatggaca	atataaaaaat	aggacgatat	2220
gacaatatca	atgataaaaa	agaattttagt	tctaaccattt	tatataaatg	tgttaaaaaa	2280
aatgataaaa	taaataaatc	acaaacgagt	cttttttttg	aatttatgaa	agggaaaggg	2340
gatcaaaaaac	ataatgttat	aaaaaaaagag	gatgtattta	ttaaaacggt	tagaacaaat	2400
aaaagtccaa	ccgaattaac	aaaaaaaatt	tcggattaca	aatgcaactt	gttatatact	2460
agtttagata	gaatccataa	aaatgtttct	atatataatg	aaagaataga	aaggacaaaag	2520
catgtaccac	agaaaaagaa	tgataacata	gatattcgcg	ggatatacaa	atcctacaat	2580
tttttttaaaa	gcatgaatat	gatgaatagt	ttatcaaaa	gttatcatat	caaaacttgt	2640
gactactcta	attatgattt	tatgaaaaat	aagatgagta	aaaaggctca	gaataagttg	2700
gtttctaagt	gtataagtaa	atataaaaaa	aaagcgatta	agaagaaaga	aaggaaggaa	2760
acaacaacaa	caaaaaaaa	atatatatat	agaaagaatg	aaatatcgat	atcgtttgat	2820
ggaaacgtat	ttggacatga	aaataggaag	agaacaaaag	agaacaataa	aagtaaagaa	2880
agtgcatata	cttcgaagag	taggaaaaat	aataaaaata	aaggagaaga	aaagaaaaca	2940
aaacgttccc	tttggttcgta	caaattaaga	aaaatgaaac	atttatgtgt	tgagaataag	3000
atgcacataa	aaaaaaatgt	acgccaaaata	ataaaaaaaa	aaaaaaataa	tatatataag	3060
accataaaaat	gtttgaacag	ttataagact	ttgatagacc	aggtgaacgt	aaaaggggat	3120
gaagagcata	aattaagtaa	ccatgttaat	aacaaaaaaa	aaaaaaaaaa	aaactgtatt	3180
aatgaaaata	atgatgataa	taataatgat	aattataatg	ataataatga	tgataataat	3240
aatgataatt	ataatgataa	taataatgat	aattataatg	ataataataa	tgatcataat	3300
gatcataata	ataatgataa	taataatgat	cttaataatg	atcatcgtaa	tgataataat	3360
caaaggggaac	atagttgtga	ggaaataaac	atacagaacg	tggaaacaaa	atcggaagga	3420
gaaaaaatatg	aaggaaaaag	aaaaaaacaaa	tatacatatt	ataataatta	ctataaaaata	3480
aatggaaaaaa	atgagataca	tgatgattat	aatataaaga	gccatggaag	tagaattaat	3540
tataatattt	ttaatataaa	agataataaa	cataataata	atgataaagg	agaaaaaagt	3600
tgtgaattaa	aaaaatgttc	aattccttat	gtaaaggaaa	aatataattt	agaaaaataat	3660
acatatgaga	taataggatt	aatatattat	ggtgataaat	ctcaagtgtg	taaagtgtata	3720
aatatgaata	acaaaagagt	atatgctatg	aaagttagtat	taaaagagtg	taatgaaata	3780
tttgtggata	attttataaa	aaaatattta	tttttaaaaa	ataatcctca	caaaaatatt	3840
atatctatat	atgatataat	ttgtaataac	aattatatct	gtataataat	ggattattgt	3900
gaaggggtcta	cattattaga	ttattttatg	tcttttagtac	ctggttcttt	ggatgtatat	3960
gaaataaaaa	agataatgaa	aaacatcttc	atagcttttag	atttctttca	ttctaataat	4020
attattcata	gagatattaa	attagagaat	attatgttta	aaaataaaaa	aaggaaaaaa	4080
aaacgttttta	attatgaaa	atatggtagt	ttttgttta	ataatcatga	ggaaatttca	4140
ttctcaacat	cttgtagtaa	ccttcataag	aaagaccttc	aattgagagg	aatggatact	4200
attgggaaaa	aaattatggg	aggaaagaag	tttattagaa	atctatataa	tgagaaacat	4260
aagaatttaa	atatttttca	gaaaaattgt	tcacacatat	tattaaaaaa	aaataactaag	4320
aagaatatat	tatcgaatga	tattcaattg	aagagcccaa	aatgttatat	aaaatataat	4380
aataatatgg	atacattatt	taattatgaa	gatgatagta	attggtcata	taattcatct	4440
atatgttatg	atataataca	agtgagtgc	gaagaagaat	atgataatgt	aaatataaaa	4500
gataaattat	atgaatataa	tatgtgtact	gatcatcaa	gatatgagag	aattgtaaat	4560
tatgaaaatt	caatacatte	tcataatcca	tatggtacca	attcaaaaata	tgaaaccttt	4620
tgtgacgacg	catttccttc	tcagatttgt	tccattcata	attataataa	aaaaggtgga	4680
cgttataatt	ttagtaaatt	atataaaaaat	aaaaaaaata	tgaaaagtaa	tatgaatcca	4740
tcatttagtg	atttatgtat	aatagatatg	gatatgatcg	aaattgtttc	aaaaacaaaa	4800
tttcctggaa	taaacaaatc	aaaaattata	tgtggaaactc	caccatatac	gccaccagaa	4860
tcatttgatg	gtattgtttc	accggggaat	gacatatggg	catgtggtgt	tattttatat	4920
gtattaatgg	atggacgctt	cccatatgaa	attaataatt	atatgcctat	tcatttaaaa	4980
aaaaaaatat	taatggaaaa	caaaccaaaa	tttgaacctt	tcatatggaa	acaacatacg	5040
gatcttttag	atctatgcct	aaggttatta	gatcctaacc	cttggacaag	aatacaaaat	5100
gctcgagaag	ccttaataca	ttattctttt	agagatttga	tataa		5145

&lt;210&gt; 343

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 343

atgattaata	catttcaa	tcgtgatttt	aataaaatttc	ctttttcatc	aatgaacaa	60
aaaataattt	cacattttac	gaacgaacat	aatgataaat	tcaatgataa	tttatctcaa	120
*tacaataac	ctcaagaatt	aaagaaaaat	ataataacaa	ataatttaca	tgatgaaaaa	180

gtaataacttta	cggataataa	tatgaaagag	aaatgtaacc	atattgaccg	cgatactatt	240
accaaagaaa	tttccattga	aagactatta	cacaagataa	gaaatttaga	aaatgaaaaa	300
aaattccttac	taagggtttt	agaaaaataa	aaaaatatag	aattagaata	taaaaaagca	360
ctagaaacac	aggcagccta	cgtaaattct	gagaataaaa	aatcacaatt	ttatgaaaac	420
gaatggttaa	atatgaaatc	cttagaatat	tcctaatgt	aa		462

&lt;210&gt; 344

&lt;211&gt; 3837

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 344

atggccatgc	ttctattctt	ttctattata	ataccgtttc	tcaagttact	tatgggttagt	60
gataactttt	atagttttat	cgtattatat	aaaatgaata	aaaaacgaga	agaggaaaaag	120
agaaggagac	gaagaagaat	acgtgcacga	gaatataaca	atgctaaata	taacaagaat	180
agatataaaa	tgaataaata	taatagaaat	aagaatatta	atgatataata	caaggatgat	240
atatattata	gtgaaaatat	ttttaagaat	gatgagataa	atttatatta	tacaataaat	300
gagaatgaag	aattttattt	aaagaaattt	aaaattttta	atttcataatc	gcgttttcaa	360
tttggtgatg	tattttatct	ttttattata	gtatcatcat	taaattttata	tttatttagag	420
gcaaggatgt	taaatgggtg	atattatttt	ttgaattatt	gtatggttatc	aacaatatca	480
tcttttttgt	tattttagttt	tacttcttta	aaaatacata	tatttaaaaa	tggaaatatt	540
aagatatctg	catgtctcaa	tgaatcaa	ctagagggtta	ctacaagcgg	tcccctttca	600
acaaaagatc	ttgtcgaaga	agaaggacat	gcacaaataa	ataatcta	tattaatgat	660
aagaatatga	ctagtgggtg	tgtaaatgat	ttttcaggtta	atggaaacaa	tgtcgaatta	720
acagacgacc	ttaagagtgg	cgaaccccaa	aacagagatg	atatacaaac	tgaagaaaca	780
aaaaaagaaa	aaatgaatac	tagaactcat	aatgatgaag	ataatacaaa	aaaaaaaat	840
ataaaggata	aaaagaaagc	taacgggtgat	gataaaagtaa	tacaaaaatg	tattgataat	900
gaaaggaaaa	aaaaacaaaa	tggtatgatt	caaagtgttaa	acgatgggtga	taaaaatagt	960
aatttttaata	ataacaataa	taataatatt	aatgggtgata	gtaataataa	taatattaat	1020
gggtgatagta	ataataataa	tattaatggg	gatagtaata	ataataatat	taattgggtgat	1080
agtaataata	ataatattaa	tggtgatagt	aataataata	atattaatgg	tgatagtaat	1140
aataataatt	atcataataa	ttatcataat	aattatcgta	ataattatca	taataattat	1200
cgtaataata	attgtaggaa	taatatttta	gaacaaaaata	aatgtgataa	aaatgttttg	1260
tggtataata	atatataata	tacaatgaaa	gataaatgata	cttatatata	tttaaaaaag	1320
aataaattta	attcgttatt	aaaaagta	tgtatcaaaa	ctaattttta	tatgataaag	1380
ataggttatg	taatatattt	atttgtgtta	ttatgtttat	gtatatattt	aataacagga	1440
gtagaatgca	gtttatttgg	tatatatata	tatttgagtt	attttaattt	taatattgaa	1500
ggaatattaa	ttgattatat	ggatattgta	aatattttta	aattaaaaat	aaagaaagga	1560
tatatctatc	ctttttttgt	tatgttacca	tttattttcc	ctgtaataat	atctatgtgt	1620
ttctttttta	gtgtattttt	tttaaatatg	tattatgaaa	gctttttcaa	gttatataaa	1680
aagatcagtg	aactaaagaa	tgaattcata	aactcctcag	aaaatgacaa	tgtgaacgaa	1740
agaatattgg	tatccgaaac	ttctaatacat	ttatgtttta	atgaaagtaa	cgataaagta	1800
tctaatacat	cagatgattt	tttatcaaga	aataatagca	acatatctag	ttcaaaaagt	1860
gaaatgataa	attcaaat	tgtattta	aaacttttga	atttttattt	ttcatttgca	1920
gttttctttt	cttatttagg	ttctgcattt	ttacatatat	ccttaggtga	aattatatgt	1980
atcgccattat	taacatttta	tcaaattgta	aagcatacca	ataaattgaa	tatcacaatt	2040
ttacttaaga	gtgagaaaa	taaattttgt	aaattccttt	tggtttatatt	atatgggttg	2100
ttatgctttt	ccataaattt	gtatgtaaac	caatgggagg	aatatataac	gaaattaaaa	2160
aggttaaaaa	gacgtatttt	attgtttgaa	aaaaataaat	ttagtgagat	tgtggatctg	2220
aatactcaaa	agggtgatgg	tgaccatttt	gatgaaacac	aaatattttc	catatttttt	2280
tcttttttaa	taaaaaaaa	tgagggttca	aaaatgaggg	ataatgat	gaatagtgt	2340
agcgaagaca	gtatatatga	tgcttatgag	cagcagatac	aattacacca	tggtgataat	2400
atgggtcaatg	gtatgttgat	gatgagaagg	atatcgatgc	aaaatttaga	ggacgacgaa	2460
acccaagtgtg	aatatataaa	tagggagatc	catacgcaag	gtgatttaca	tgtacgaaga	2520
acgaatcaag	gtattttaag	atttaatatg	agaaggggca	aaaaaggggtc	caatgaaaa	2580
atgggtgtcc	accatgagag	tggtaatgtg	gatgatgcga	atgggtatgaa	taatgtggat	2640
gatacgaata	atatgaataa	tgtggatgg	acgaataata	tgaataatgt	ggatgggtacg	2700
aataatatga	ataatatgga	tggttaggaat	aatatgaata	atataaatag	tgtggataat	2760
atgaacaatt	taataataaa	tgatgggtgaa	gaagaagaag	aatgtgtgaa	cgatgtttta	2820
aattatgata	ataataatta	tgctattaat	gaagatgctg	aggaatatat	aaaaaatatc	2880
tcaggagaac	gagctgttat	tatttgttct	gaaaaaagaa	tatatgaaaa	gaacgggaaat	2940
ggtgatataa	taactagaaa	ttataaaaa	gaagaacgat	atatatat	aaaaaatgg	3000
attcctttta	aatctatgat	attgtcaaaa	ttagaaaaaga	ggaaaaaggaa	tagaaaaag	3060
gcataataa	ctcctagagt	attaatatta	atacatttct	ttttatttat	acttattgtt	3120
ttcatatttt	taatgggtatt	ctttaaaaaa	gagcctattt	ttcgttttaa	tatgccatca	3180
gttaataagc	gttttaataa	tttttttaaa	tcaacaagtt	ttcacgaaat	tataccaaat	3240
agtgtaggga	aatgtaaaac	aaaaaaatat	atagcaaaaag	aacctgtttt	taatgtgggt	3300
catatatacc	atgaagagaa	gacattttat	catgcaactc	ttttattttt	acaaggttta	3360
aqatctgtaa	aaattatgaa	tatgaatttt	tattatgaaa	aaggcatata	ttatttatct	3420



ttggatggat	attttaaaca	tattataggt	cctctctttc	ttaaattatg	tttaggtaca	3480
aacttttgtc	ccataagtac	atatgcattt	ttagtaggaa	gtaaaccaac	tttctcagta	3540
aatgttgctg	ttcaatgtaa	taataaaaaa	ccaccatatt	atatgacgga	tattattgta	3600
aaagatttaa	aaattacaaa	aatagaaata	gttaaacatt	cagatgttat	cgataatgtg	3660
gatattaaat	tagatgatgt	acaagataga	gtacaagaaa	aggttaatgc	catgttagaa	3720
gcaaaaaaaa	aaattatcgt	ctggaaaaat	caaaagtatc	atttggaggg	ttttctcaat	3780
tattttaatat	ctaaaaatgc	attatctggg	ttttcctgtg	aaccataaaa	ttattga	3837

&lt;210&gt; 345

&lt;211&gt; 1998

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 345

atgcaatatt	tttttctggt	atttctagct	gttttagcaa	aagggttttt	aagaaataaa	60
gaacacgcca	attttaataaa	ctcatacaat	gacattgtag	aagatataaa	tattaaaaag	120
gaagagaaaa	gttcaagtga	acctcctttc	attcctataa	aaaataagat	agataatgtt	180
catacaaaaa	ataacaatca	atataattta	cataataata	aatctaataa	aacacacctt	240
acttatggaa	cacatactag	cttttttaca	aactgcacca	tcaatgattg	tgtagatgtc	300
gataataaag	attctgaaat	taataatata	acaaaagaaa	aagatgataa	taataataat	360
aatggaacta	agcaaattga	agagaaaaat	aaaatcaata	aaagcgattt	gcatagacaa	420
aatgaattaa	atttcaaaa	tggaaaaaat	gaacaagaca	taaataaaaa	tgaaaaagga	480
aaacaggata	tctctaattc	caatgcagag	aacaaaaagg	atgtaaaaaga	aggagtgaag	540
gaattagaag	aaaagaaaaa	agaagagaaa	atttcagatg	atcataaagt	agaggaaaaac	600
aaaaaatctg	atgaccataa	agttgaggaa	aacaaaaaat	ctgatgatca	taaagttgag	660
gaaaacaaaa	aatctgatga	tcataaaaata	gaagaagtaa	aaaaagtaga	ggaacatgaa	720
gaagacgaag	aagaggataa	gaaagaaaaa	aaatcagaaa	acaaaaataa	agatgaaaat	780
aaagatgaaa	atgatgaaga	taatgatgaa	ataagtgatg	aagatgaagt	tgatgatgat	840
gttgaagaag	ataaaaaatga	aaatgatgat	attgatgatg	ataaaaaagga	aacagataaa	900
acacatttgg	aagaagagga	aaatgaaata	attgaaaagg	aatttagtga	taagaaaaag	960
aatggtaaaa	ataaagatac	taagaaggaa	aaaagttaaag	atactgagaa	ggaaaaaagt	1020
aaagatatag	agaaggaaaa	aagttaaagat	aaagagaagg	aaaaaagtaa	agataaaagag	1080
aaggaaaaag	gtaaagataa	agagaaggaa	aaaagttaaag	atattgagaa	ggaaaaagaa	1140
aaagataaag	atatagagaa	ggaaaaaagt	aaagatactg	cgaaggaaaa	agaaaaagat	1200
aaagatatag	agaaaaaaga	aagcaaaagt	atggaaaaat	taaagaataa	acaaaatgat	1260
gaaaaaaaaga	aagacgataa	cgaaaagaaa	aaaaatgata	aacaagatat	acatgatgat	1320
aatgatgatg	aaaatgatat	ggaagaaata	gaagaaaatg	atgacgaaga	agatgaggat	1380
gaagacatgg	aaaacaaaaa	aaaaaaaaaaa	aaaggaaaaa	atggaaatga	aaatggaaat	1440
gaaaatggaa	gtgaaaatgg	aaatgaaaat	ggaaatgaaa	atggaaatga	aaatgaaaat	1500
aaaaatgaaa	gtgaaaatga	aaatgaaaat	gaaaatgaaa	acgaaaatgg	aaacgaaaat	1560
gaaaacgaaa	aagaaaacga	aaaagataaa	aatattaaag	agattgaaaa	tgtaacaaat	1620
gcaaaacaagg	aaaactatga	aaaaataaat	aaaaattctg	aaataacaat	aacaaaatca	1680
aatatagata	tatataataa	taataggaat	aatgatattg	ataaagtaaa	taaccatata	1740
ttcacaaatc	aacaaaaaaa	acacaatctt	cataatgaac	aaaataaatt	taatgaaaca	1800
ttaaattgtat	caaccaatca	taaaaatcat	tatgaggaga	aaaagaaata	tgaatctaac	1860
atgttcaacg	tagacaaaag	aatgcataaa	aattttaaaa	gcatggatac	aatacttcac	1920
aatttgaatg	ataaattaa	ccaccacaaa	gatctaaaaa	atgtattaaa	tgataaaaaa	1980
aaaaaaaaaa	ataaataa					1998

&lt;210&gt; 346

&lt;211&gt; 2658

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 346

atgttaattt	acaatttttt	tattgtgtta	atttatatat	tccaaacagc	tagctattac	60
acgaaaagtc	ttactggatc	atcgtattct	gaaatatatt	caaaatcatt	gagtgatgat	120
gaatcggaca	catatcaagg	aaaggattat	gataataaat	ctccttatta	tatttattca	180
catcttctaa	caataataat	aaaaaagaat	aaatttaattg	gagataagaa	actcatatat	240
gaatatgcaa	atggacatcc	aaaaagttca	tatacatatg	atacattttt	taatagagta	300
ttatcgttta	gtgatggctt	gaatacatat	gaaggtagag	gaatacaagt	aaaaaaatat	360
aatgaggaac	aaaataatgg	tatgttttaga	ttgttaggtc	tatatggtag	taattcagca	420
aattggataa	cagcagatat	ttcgtgcatg	ttaagtgggtg	ttacgacagt	agttatgcac	480
tctaaattta	tcttgaacga	aatagtagat	attttgaatg	aagtataatt	agaatggctc	540
tgtttagatt	tagattttgt	agagaattta	cttatcttta	agagtagtct	accacattta	600
aaaaagttga	tcattcttaga	cacgtttata	aatccatcca	tttgtaatat	aaagggggga	660
aaatcaaaaa	atggtgatga	agggcaagct	gtaggtaata	atggagaaaa	ggaagaaaaa	720
gaagaacata	aaggagaagc	cgaagaagat	gatgaagatg	gtgaagatga	tgaagatgat	780

gaagatgatg	aagatggtga	agatgatgaa	gatgatgaag	atggtgaaga	tggtgaagat	840
gatgaagatg	atgaagatgg	tgaagatggt	gaagatgatg	atgatgacga	aaaaggagat	900
aacatcaaag	atgattatatt	atataaaaaa	caaatgaaa	ttcccaatga	aaatattgta	960
gaagaacaag	gagaaggtga	agaccaaaga	aatgtacacc	aaacagtaca	acctacacct	1020
tatggtgcta	atacaaaaca	atacttaaaa	aaaaaaaaaa	aaaaaggac	tgaaaatggt	1080
gaagaaagaa	agaaatcaaa	tatgaaacgc	aaagaatcaa	aatggattaa	gaaacatatg	1140
tacccaaaac	ttatatatga	aaatatcgat	ttggaagata	tttgtgaaga	tgagaaaaaa	1200
aagattgaaa	aattaaaata	tttaaaagaa	gaagctaaaa	agtatggaat	tcaataata	1260
caatttaatg	aaatgttaat	aaataaaaat	aaataatgtg	taacatataa	tatacaaaat	1320
gataaagaaa	atttcatatc	tactattgta	tatacatctg	gtacatctgg	tagacctaaa	1380
ggtgtaatgt	tatcaataaa	aaatatatat	tatatggtaa	tacctttaag	taaacattct	1440
atattttacat	ataatgttga	tacccatctt	tcatattttac	ctttatcaca	tatatatgaa	1500
aggattaata	tatacttatg	ttttgtatta	acagttgaaa	tacatatatg	gagtaaaaaat	1560
ttaaaatatt	ttagctcaga	tattcttgta	tctaaatcat	catttttagc	tggtgtacca	1620
aaagtattta	atagaatata	taacaatgtc	ataacagaaa	ttgggaaatt	accattttta	1680
aaaaaatttt	ttgtagagaa	gatcttgctg	ttaaaacgat	ctaataatgaa	tggaaggttt	1740
agtaaattta	ttgaagcaat	aacaaatata	tcaaaaaaaa	taagaagtaa	aattaaccct	1800
aattttaaata	cgttttatac	aggcggaggt	aaaacgtcac	ctaaagttat	aagcgaatta	1860
tctcttctat	tgaatgtaag	tatacaacag	ggttatggat	taactgaaac	gactggacca	1920
ttatttggtc	aacatagaaa	agataaagat	cctgaaagta	ccggaggacc	tatatcacca	1980
catgtattat	ataaggtaca	atcatgggaa	atatataatg	caaaggatag	tttaccaga	2040
ggagaattat	taataaaaagg	agattgtata	tttcatggat	attttgtaca	taaagatatt	2100
acagataaact	cttttacaga	agataaaattt	tttaaaacag	gagatatagt	acaaataaat	2160
aaaaacggat	ctttaacatt	tttagacaga	tcaaaaggat	tattaaaatt	agcacaaggc	2220
gaatatattc	agacagatat	gttaaatagt	ctttattcag	aaattccatt	tattaatcat	2280
tgtgttgttt	atgcagatga	tacactaagc	ggacctatag	ccgttgtatc	tattgacaaa	2340
gaattatttta	taaaacattt	gttagaagat	aatataataa	gtgatgtagg	tacagtagaa	2400
gaagaattct	tagaagctat	tgatgatgaa	caaattaaact	cagatgtata	tggttaattat	2460
gttaaacaaa	aaatgttaga	agcatataaa	aaaacaaatc	taaatggata	taatattatt	2520
aatcataatat	atctaactgt	aaagggtatg	gatattttcta	attatattac	accacacctt	2580
aaaattaaaa	gatttcatgt	atttagagat	tatgcctttt	ttattgatga	catcaaaaaa	2640
ttgtattctt	ccaagtag					2658

&lt;210&gt; 347

&lt;211&gt; 735

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 347

atgaaaaaaa	aaaataacaa	caagttacat	tacctcgatt	ctaaagggaa	actttacact	60
agtgggctta	gatctgatac	gaaagagaaa	tatggggaaa	taccttcac	taataaaaaat	120
cacaacttga	tagaaaaata	caatgaatta	caaagtttat	tatccaagga	agaagaaaag	180
tatgattttg	tgaaaaatga	attaggggat	ttacaaaaac	aaaaagattt	gctaaagtgg	240
catttggtgta	acaatattaa	aaagttaagt	atgaaaagaa	gtgactacaa	attttaaaca	300
gaaacaaaaa	gtaaattaga	atctaaatta	aaatcattaa	aagatatgaa	taaaattcat	360
aagtttgaac	atgatacttt	agaagaatta	gtacataaaa	tggaacaaga	gttagaaact	420
aaaatgtaca	taaaaaatga	tatagaaaat	atattttaatg	aatgtattaa	taaaaaagat	480
gaatatctca	aagatataac	tcaagaaaga	atcagtgat	tcaaagaaag	aaaaaaaaga	540
caaaaccagt	tacaaaaatt	attattaatt	atgaaacaag	aaaataataa	aaattataat	600
attaactatc	tgaagaaata	tgaaagtaat	ctaataaatg	aaattaatag	ttataaaaaat	660
tataaagatt	tcgaaactaa	aattgctatg	gatttaattg	atgatcattc	tttaaacgat	720
ctgtacgtta	catga					735

&lt;210&gt; 348

&lt;211&gt; 2667

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 348

atgcacatta	tatttagtgt	gtgtttgttt	atcattttaca	taattcatgt	atataccttgt	60
aagtctgggt	gttttaggtaa	agataaagg	tattcagaaa	tttgtgagaa	ggcgatatat	120
gagaatgaat	caaatacatt	ttgtatgaaa	gatactttta	ttcgagagtc	cttattttatt	180
tataagccta	ttatgaaatt	attatttaaaa	aaatatagat	tacgtaataa	taaaatagca	240
atagtcgaac	atgcttatgg	tgaaccacaa	aattttataa	catatgggaa	attttttcaga	300
aaagtattat	ccttttagtca	ttcattaaat	aattttgaag	gacaagggtat	acaaggtaaa	360
agttataaag	aacatcaaaa	tcatggatgg	tttagattat	taggtatata	tggtagcaat	420
tctataaatt	ggttaattgt	tgatatggca	gctatgatga	gtggtgtaac	aaccttgatt	480
ttacatttcta	acttttagtat	agatgtaatt	gtaaacatat	taaatgaaac	gaaattagaa	540

tggttatggt	tagattttaga	tttagttgat	ggcttattac	ttcatagaca	tgaattacca	600
tatttgaaaa	aattaataat	tttagataac	ttagtgaac	ctatacgaat	agatattctt	660
cggttatggt	ttaataatga	aaataacggt	tcagaaatg	atgatgctag	tgatgatgat	720
gaaaatagtg	aatcgctcga	tgaatcggtt	gaaatgaata	tggttcttgc	agaatatgat	780
gtagaaaaat	tagaaaaaat	aaaagattta	aaagaaagat	caaaaaatgt	tggaattaga	840
tttttagaat	ttgatgacgt	atcaagtgtc	ccaactaaaa	tttataatat	tcaaaatgat	900
gaaccagatt	ttattacttc	tattgtatat	acatctggaa	catctggaaa	acctaagggt	960
gttatgttaa	gtaattttaa	catgtataat	gctattgtac	cattatgtaa	acacagtatg	1020
ctaaattatc	atccaaaagc	acatttatcc	tatttacctg	tatcacatat	atatgaaaga	1080
gttaatgtat	atgttgcttt	cttatcaggt	ataaaaaatg	atatttggag	caaaaaatc	1140
aatttctttt	ctagagatat	atttaattca	aaagggtgaat	tattagtagg	ggtacccaaa	1200
gtttttaata	gaatctattc	aaatattatg	gcagaaataa	ataatttgtc	agctactaaa	1260
agaagaaata	taaaaaatgt	tttctcatta	cgtagatctg	ttaattgtgc	ttgctttaca	1320
aatttatttag	aaggattaac	tggatattca	tctaaaatta	gaaattgtgt	aaacccaaat	1380
ttagaagtca	tattaaatgg	tgggtggaaag	ttatctccaa	gaattgctga	agaattacgt	1440
gttctatttaa	atgttaactt	ttatcaaggc	tatgggttaa	cagaaaccac	aggtcctatt	1500
tttgtacaac	aaaaaagaga	ttataataca	gagggtcccat	gagggtcccat	agccccta	1560
acaaaatata	aagtaagaac	atgggaaact	tataaagcat	cagattctac	acctaaggga	1620
gaattatttaa	ttaaaagtga	ttcccatatt	aaaggatact	ttctagaaag	agaactaaca	1680
gaaaattctt	ttacatatga	tcattttttt	gtaacagggt	atatcgttca	aataaatgat	1740
aatgggtctt	taactttctt	agatagatct	aaagggttag	tgaaattatc	acaaggggaa	1800
tatatagaaa	cagatttggt	aaataatatt	tattcagaaa	ttccttttat	taataattgt	1860
gttgtttatg	gtgatgattc	tttagatgaa	gccttagcta	ttatttctgt	tgataaatat	1920
ttattatttta	gatgtttaag	agatgataat	atgtttaaag	aaactggaat	taatgaaaaa	1980
aattatatgg	ataaattatc	tgatcaaaac	ataaatacaa	aacattttat	tgattacgtt	2040
aaaaataaaa	tgtagaagt	atataataat	acaaatttaa	ataggtataa	tattattaat	2100
catattttatt	taacgtccaa	aacttgggat	acaaccaatt	atcttacacc	aacaatgaag	2160
gtgaagagat	tttctgtcat	acaagattat	gctttcttca	ttgatcaagt	taaaaatata	2220
tttaaaaaaa	aattaaaagg	tcaaaaaggaa	cgcactaagc	gtttacaaaa	gaaaacctca	2280
gatgaacagg	aaataaaaaa	tgatgaaaaa	gatcaagaaa	aatctaaaaa	aagttatttt	2340
tcaagattat	cacaaaagag	aaaatcacgt	tctcaagaaa	aaaataaatc	aacatctcaa	2400
gaaaaaaata	aatcaacatc	tcaagaaaaa	aataaatcaa	aatctaaaga	aaaaaataca	2460
tcaacacttc	cacaggataa	tatatccata	ccagtgcata	ataaaattga	aaaaccgcaa	2520
caaaataata	tgtaaaatat	tacattaaaa	aataacctca	aatctactga	tgcatcttta	2580
aaaataacctg	aaaaaaataa	agtacaaaac	aataaatcga	gatttcaagt	tcaaaatgta	2640
cgagaagaac	ttgaaatgaa	ttcataa				2667

&lt;210&gt; 349

&lt;211&gt; 2919

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 349

atgagtata	aacaaagtaa	aaaaaataaa	aatagtaaaa	aaaataaaaa	taataaaagt	60
gataaaaaatg	atataaacag	taaaaacaaa	aagaataacg	ataataataa	aacaaatgat	120
aattatttgta	accaagttat	agataatcag	atgatgagg	tgatagaaac	accagaacaa	180
aatgataaca	taaagaagga	aaatccttcg	agtaataata	ataataataa	taataaagat	240
gatgccatat	gtaataataa	taaagatgat	acaatatgta	ataataaaga	tgataccata	300
tgtaataata	ataaagatga	taccatatgt	aataacaaag	atgataccat	atgtaataat	360
aataaagatg	atatcatatg	taataacaaa	gatgatacca	tgtgtaataa	taaagatgat	420
accatatgta	ataataaaga	tgataccata	tgtaataaca	aagatgacat	catatgtaat	480
aacaaagatg	acatcatatg	taataataac	gatgatacca	tatgtaataa	taaagatgat	540
accatatgta	ataataacga	tgataccata	tgtaataata	acgatgatac	catatgtaat	600
aataacgatg	ataccatatg	taataataac	gatgatacca	tatgtaataa	taaagatgat	660
ttgatgaatg	ataaaaaacga	gaaacctttg	aataatggcg	ataaggaaga	tccttttaaat	720
aacaatgaat	ccaataatat	ggataaaaaat	aaaaacgcag	aagaagggttc	ctcttggtta	780
tcgtcccttc	aaaatgaagg	agtagatatt	aatcaaacga	aggattataa	agaaaaaaa	840
cgagtaagcg	atgcttctga	tatatatgca	agaactgata	gtgtgaatag	taatttaata	900
aaaatttagtc	aaagtagtga	agaatgggaa	ccacaaaata	aatggacctt	atctgtttta	960
tttcaaaaca	taaaatctat	tgttgtaaaa	aattatatat	ttgtagcaaa	aaaatgtggg	1020
attcctaacc	aaccgaataa	acctggctct	gtactagcca	taagtataga	aaaagcta	1080
aataatgatt	ctgataatat	aattgtacaa	actccatgtg	cttatgagaa	atattcetta	1140
agaggtaaat	taattcaaca	taaaagctta	tatccatgta	ctattacatg	tatgatgaat	1200
ggaagtatag	ggggatttgg	aaaagtagtt	atcttaggag	aacaaaacgg	aaatgtacta	1260
attttataaaa	ttgataaatt	tgaatgtata	ttaaaattaa	atcgaaga	atgcttaaaa	1320
aaatattttt	ataataatcc	aactactaga	agaaaatcta	taataaatta	tatggatttt	1380
aaagagaag	ttgttaatta	ttatcatcat	cctagtaatg	ataaagaaca	acaaaaacaa	1440
tcaacacagt	ataatcataa	caaacataat	aacaatttta	taataattt	agacccatcc	1500
caaaccaatc	ataacaatcc	atatgatgat	aatgacttgt	catatcaaat	atcagggtatt	1560

tcagttaa	ccacatttgc	taattttatt	cattggatta	tagccggaaa	tatgaaagggc	1620
tatatattt	tttgggaagt	acctagtgga	aatattatta	aaattttatt	acctccttta	1680
tattttttt	atgaagcaaa	aagaaaaaaa	aaaaaaaaa	aaaaaaaaa	aagaaagaat	1740
tataacaatc	ctaattatcc	ttactcttct	tcgtcgtcct	cctcatcctc	ctcgtcttca	1800
tcctcatcat	cgtcctcctt	ttcttcgtca	tcggtttcat	catattatag	tgatgatttt	1860
tattatgcat	ctaattggga	gaaaaaaa	aaaaaaaaga	aaagaaagaa	aaaaaaaaca	1920
aacacaaata	aaaataaaaa	taaaaacata	aatataaatg	aaattaaaaa	aaatacaaac	1980
gaagtgcaga	atcaaaaata	gcaaaattat	aatgggacac	aaaataattt	aagcatctca	2040
catgatactc	ctaattagtat	caacgtaaat	gaaaaattag	aaaaaagaga	agaagtaaat	2100
aagcaaaata	atgggtttac	taatagtaat	gaacaaaata	gtacttataa	tagtgacgac	2160
aatagttata	ataatagcga	tgaaagtagt	gatgataata	gtgactattg	tagtgatgat	2220
ttatattcag	atgaatatag	tgaaagtgat	acttctccta	ataattcaac	taatgaatcg	2280
tatgatacaa	attcaattca	taataagaga	aaaaaaaata	aaaagaatac	atataacgat	2340
atatccaaca	aatgtttatgt	ttcagctatc	ctagctgtta	cacataaata	tgaattatgg	2400
gttgcatattg	gtaattggata	tatagccgtt	tatgacttat	atgatttcca	attacttctt	2460
tatacatgca	tttcaaaaag	tcccataatg	gattttaa	attccaaaat	tttggaaagat	2520
gtcttgatat	taattggtaa	caattactta	tccgtgtggg	atagcaaaaac	cttaaaacaa	2580
gttcgaaaaa	tcccaactag	ccaaatcacc	agcaaaaatt	cttcattatc	gaccatttat	2640
ttattagagt	caccaaactc	atggaaatat	aaacaagtgg	ttcttattgc	aggggtgta	2700
aatggatccg	tttgtttaac	caatataaca	aaaaaagttg	atggagattt	aactttctct	2760
tatatcaaaa	catataataa	acattttgaa	ccatagtcc	ccatcagcta	tatttatatt	2820
gaacctacta	ttaacgctgc	attcgttgga	gatgcaagcg	gggttggttt	tactttacct	2880
agaattctaa	gtacatttaa	aaataatgat	agttcataa			2919

&lt;210&gt; 350

&lt;211&gt; 2295

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 350

atgagggata	agaagatca	tccaaatggt	caaaaaaata	aattttcgta	tgatggatat	60
gatgataagt	attcatatga	tcagaattat	tataataatt	taaacaatat	gatgacagat	120
ataaaaaacca	aaaagaaaaa	atatatgcca	ccatcaagta	attttcccca	cattgtttaat	180
aataaaaaatg	gtaaacacata	cacaagcata	aactataata	ataaggatga	atatatatcc	240
ggatacgata	taaaatataa	taaccatggt	gataaatatg	gtagtaatac	gacataccat	300
aataataata	gtgataataa	taataataat	aataataata	ataataacaa	tatgtacaac	360
ccaaatttatt	attgtactaa	ttatgaagat	aggtgctata	acaatgtgtc	aaacattcaa	420
aataaagtaa	acattacaaa	aaatgatgat	gatgatgaaa	tttgtgaaaa	tttaaatgat	480
aaacatgtga	atgatccttt	aaatgtcgaa	gaaaaaaaaa	tgtagagag	aatattttaat	540
gattgccaag	agtgtcaaga	aataacaaca	ttaaataata	tgaaagaatg	tattgtaaat	600
atgtgtaatt	ataattttta	tagttgttaa	ataatatctt	tattatttta	taataggata	660
ttaaaatgtg	taatttttta	aaacaaaatg	aatttaatac	atttttatga	tgaattgtta	720
caatatttta	tgtaaataa	taaaatggat	attttaaaag	aatttaaaaa	atatatgaac	780
ttataataac	aagatgggta	tacatgtgcg	tattataaag	ataaaaaat	ataaatgat	840
ttattacaaa	tggttcatgt	atggaaaaaa	cttttaataa	atgatatgca	agaaacgaaa	900
gaattattaa	atatattttca	ttatgataat	agaacagatg	aaaataataa	aaattatgag	960
gggccacttt	ataataatca	tcataataat	cataataatc	atagtaatca	taataatcat	1020
attaatcata	ataatcatag	taatcataat	aatcataata	atcataataa	tcataataat	1080
catagtaatc	atagtaatca	taataatcgt	aatcataatt	attataataa	ttattattta	1140
tatacaaat	atcaaaagca	taaaaacaat	aaaatacccc	cccctccgag	tggtcctcct	1200
ccaaataaca	taaaatataa	taatgtacat	ccgaacaact	ataatcctcc	ttcacctcct	1260
ccaggtacct	tacaaacggt	taacacaaat	gattctttta	aagggtttaag	ttcttatgat	1320
aatacatagc	aagaacatat	agatgatttt	aaacataact	ttaattctaa	catcaacata	1380
aatcatttcta	tggaatataa	agatacatgg	aagaatccag	aaaatattac	ggttggtttt	1440
ttagctacaa	tattaaaaat	gatatctaaa	aaagtaaaga	aattacaaaa	tcccttaata	1500
ccttatacac	ctatcgatac	atcttatgct	tatcaaaactc	caccttctgt	tcattgtatca	1560
caaaaaatga	atgaaaaaat	agacgaattt	tatgacgagt	tatctttttat	attaaataat	1620
gaggaggtgc	aaagtacgga	tatatcagat	acgaatgata	taaattgatgt	atatgaaagt	1680
tataaaaaat	taacaggtga	acacaaaaaa	ggaaaaaaa	aaaatacaaa	acatagaaat	1740
aatgataatg	ataatggaaa	tggaaatgga	aatggaaatg	gaaatggaaa	tggaaatgga	1800
aatggaaatg	gaaatggaaa	tggaaatgga	aatggaaatg	gaaatggaaa	tggaaatgga	1860
aatggaaatg	gaaatggaaa	tggaaatgga	aatggaaatg	gaaatggaaa	tgataataat	1920
aataataata	taaaagataa	taattttgaa	tacgaaaaaa	aagatgaaaa	ttatttctcc	1980
agtgatacca	atacaacctt	ttcatcatta	gaaatattag	atgataacat	gcttgatcta	2040
ttggtagata	caaacaaatt	gtgtaaaaat	aaaaaaagaa	aaaaagtaa	aaatgttaat	2100
tttaatacaa	tagctataga	aaattcacaa	aattggagtg	aaacacaaaa	ttataattca	2160
ttaaattata	tggatattta	ttcagctcct	aataatacaa	acgatgtttt	tgaaaattac	2220
agaagaaata	aagcttatgt	atatcatgag	accatagctc	aaaaatttta	tgacctcaaa	2280
tttaaggata	cttaa					2295

<210> 351  
 <211> 1212  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 351  
 atggataaaa atacattaaa aagaagaagt aggccttcttc aaaaaaatga agcacgcatg 60  
 agtatgttat taggaagaaa tctggatgac gaaatttcaa aggaaaaaaa agaaagtaat 120  
 aaaaatgata aacataaaaa aaatgaccaa cataagaaaa atgataaatc taatcaaaat 180  
 ggcgaagata atcaaaatgg cgaagataat caaaatgacg aatctaatac aaatgacgaa 240  
 cataaaaaaa atgatgaaca taaaaaaaat gatgaacata atcaaaatga cgaacataat 300  
 caaaatgacg aacataaatca aaatgacgaa cataatcaaa atgatgaaca taatcaaaat 360  
 gacgaacata atcaaaatga cgaacataat caaaatgacg aacataatca aaatgacgaa 420  
 tctaatacaa atgataaaaa tagaaaggaa ataccccca aagaggaaaa ggataaaagag 480  
 aataatccaa gtgtcgttat ggaaaaataa aataatataa gaaaggacca agataataaa 540  
 actagtgaac ataaaagtgc aactaatata tataataaag ataaaaataa tgattataat 600  
 aaattgttag ataaagatga taataataat aacaataaaa atattaataa aaatgatgaa 660  
 aatgatttta caagcataaa taatgataata cctaataaaa ataaaaatac atctcaattt 720  
 attattacga aacatgaaaa attacatttt atcatattaa taattttatg tatctttata 780  
 agtattttta aagtatatta taataataaaa aataatttaa tttataaaaa aaaaaaaa 840  
 ggaaataata atttaaatat tgttcagatg atttttttca actttataaa ttcaccaat 900  
 tttttttttt ccttttctgt tttttataat atactttttt tgtaattat tatgttaatg 960  
 tatataaaaa aaaataacat aacacgaaaa aggattcaag atttttttgt aaatatgaaa 1020  
 aataaattga ataatacaaaa tgaacacgtt ttttatttta taaataatgc agttttgtgt 1080  
 atccttttta tgggccaagt atttaaatca tatataattt ctatgtttt aataaatttg 1140  
 tttcacgata ttttgcataa ttatttaata ggtgtgtcca tgttacaacc ccagaaggta 1200  
 gtattattat ga 1212

<210> 352  
 <211> 4038  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 352  
 atggctgtaa agattgaagc tccatatttt acgaacgatt ttgtaaaaac aggtacaaat 60  
 aaaaatgaac aaaatgacga taatgataag aaccctaattg aacagattac agaagatgac 120  
 agctgggttg tgattggatc atttttttga agtcacgggtt tggatgaatca acagattgaa 180  
 agctacaatg attttattga ataccgtatg caagaaatta tcatgagaca tcccaagata 240  
 gaaataagac cacaacccca atataggaca gacagagatg agaataataa tataatatat 300  
 tcttttaaat ttgttcagct atcttttagat agaccttttt atgatgagaa gaatttatct 360  
 aataagaatt tatggcccca agaagccga ttaaggaatt taacttattc atcggcaata 420  
 tatattgata ttgaacagtc gacttatatt attgatgagg ttacaaagaa acctgttttg 480  
 aaagaaaagt ttatatatga aagaataaat ttaggtagaa taccattaat gcttaaatct 540  
 atgttttgtt ggacaaaagg attaccagag aatgaaattg ctgatatggg tgaatgttct 600  
 tatgatcaag gtggttattt tattgtgaat ggtggtgaaa aagttcttgt tgcacaagaa 660  
 agaattggcta ataattttat ttatgtcttt aaaaaaaaac aaccttctaa atttggatgg 720  
 gttgctgaaa ttagatcaca aatggaacgt tcacaagcta ctacagggtt ttctgtaaaa 780  
 atgaaaacaa gaagtgggtg ttcacaatat ggttagtaata aatcagggtg gcaattagtt 840  
 gctacgtttac cttatattag aacagaaata tctgtaggta tattatttag ggcttttagt 900  
 tgtacatcgg atcgtgatat ttacaaaaga atagtatatg attttaatga taaactaatg 960  
 attaatgtct taagagaaac cttagaagaa tgtatagagt atccaacaca agatgtttgt 1020  
 ttagatttca ttggaaaaag aggaccaacc gttggagcct ccagagaaaa aagaatttta 1080  
 tatgctaaag aattattacg taaagaagta ttaccacata tgggtactca tctgtgtg 1140  
 gaaagtaaaa aatcatattt tattggatat atgattaata gattattatt agctgaatta 1200  
 ggtagaatta aagaggatga tctggatcat ttcggtaaaa aaagattaga tattgctgga 1260  
 ccattaatgg ctagtagttt ttctacttat tttagaaaaa tggctaaaga tgtagaaga 1320  
 gttttacaaa gacaaattga taataataaa cctttcgatg ctggtggtgc tatacgtagc 1380  
 tgttcacaaa ttacacaagg catgcaatat cagctagcta ctggaaattg gggaaaggat 1440  
 aaagacggaa aagttataag aacaggggtt gcacagggtt taaatagatt aacatattct 1500  
 tcatgtttat cacatttaag acgattaaat acacccttag gtagagaagg gaaaatggcg 1560  
 aagcctagac aattacataa tacacattgg ggtatgattt gtccatttga aacaccagaa 1620  
 ggacaatccg ttggttttagt aaaaaatttg tccttaattg gtgatataag tgttgaaga 1680  
 tcaacaaata atatatatga atttttaaca gaatggggat tagaatcatt agatgaagta 1740  
 cctcctgaac taatgaaaga aaagtgaag ttatttttaa atgggaaatg ggttggatgc 1800  
 tttaatcaaa tcgataattt aatagaaaca ttatatgaat taaggagacg atgtgatata 1860  
 tcacctgaag cttctatagt aagagatgtt aatagtaaag aaataaaaat ttttactgat 1920  
 tctggtcgag ctatgagacc tttatatgtt gttaaaaatg tgaatgggtg aaataaatta 1980

aaattaacaa	aagagcatgt	taataatatt	gaaaaatatt	cagaaacata	taattgggat	2040
tatcttatac	aagaaggat	tattgaatat	attgattgtg	aagaagaaga	aacaactatg	2100
ataagtatgt	ttattgatga	tttaaaaaaca	ggaacagggt	attataataa	ttttactcat	2160
tgtgaaatac	atccatcatt	aatattagggt	gtttgtgcat	caatcattcc	ttttagtcat	2220
cataatcaaa	gtcctcgtaa	tacatatcaa	agtgcattgg	ggaaacaagc	tatgggaata	2280
tatgtaacaa	atttttaatat	tagattagat	acattagctc	attttattata	ttatcctcag	2340
aaaccattag	tctgtacaaa	ggtaatggaa	tatttacggt	ttagagagct	tccagcaggt	2400
attaatgcaa	tcgttgctat	tatgtgttat	acagggtata	accaagaaga	tagtttgatt	2460
atgaaccaat	cttctataga	tcgtgggtta	tttagaagtg	tattttatcg	tacttatacg	2520
agtgaagaga	agcaacaagg	tagtttaatt	attgaatctt	ttgaaaaacc	atcgggtcga	2580
gtgggttaaaa	atttataaaag	agggtgattat	acaaaattgg	atgatgatgg	attaatagct	2640
ccaggaattc	gtgttttggg	agatgatata	ataattggaa	aagtatcacc	aaatattgat	2700
gacgaagatg	acataataat	tgaaaagagg	aatacatcaa	gtagtagtat	tcaaatatat	2760
aataaggatt	cgatatctaa	taataatagt	aataatagta	ataataatat	gaataatatg	2820
agtaatatga	gtaatatgag	taatatccga	agtagtataa	gtagtaattct	ttccttttca	2880
tcaaatatag	gatcatcaaa	cgtgttagat	acattaccag	attcacctat	aaacacacaa	2940
tataataata	ataataatat	taatattaat	agtagtagta	ataattattc	acttcatggt	3000
gctgctagt	ttacttcctc	aaccccatcc	agtaccacga	tatttagtag	tggtcaaaca	3060
gcagggagct	caaatagtaa	tactaaatat	ggtactacaa	tagtttagtag	tacaaaagat	3120
gatacagaaa	ttcctacatt	aactataagt	tccacaaatg	tgtaaaaaca	atataaaaag	3180
gattgttctt	taagcttaag	atccaatgaa	aatgggtgaa	tagatactgt	tatgttatca	3240
tcaaatagta	gaggaaataa	atttgcaaa	gttaaaagtc	gttctgtacg	tataccacaa	3300
attggtgata	aattcgctag	tagacatggg	caaaaaggga	ctattgggtat	tacatataga	3360
acagaagata	tgcttttag	ttcgcttggt	atttttcctg	atattattat	gaacccacat	3420
gcagtacctt	ctcgtatgac	tattggacat	ctgggtgaa	gcttaacagg	aaaagttgca	3480
gccattgaag	gaggagaagg	agatgctacc	cctttttcta	aaataactgt	tcaagagatc	3540
tcacaaaaat	tacataatct	tggttatgaa	aaatatggaa	atgaaatggt	atataatgga	3600
cataacggaa	gaatgttaaa	gtccaaaata	tttattggac	caacttatta	tcaaagatta	3660
aaacatatgg	ttgaagataa	aatacatgca	agaagtagag	gaccattaac	tagattaca	3720
agacaaccaa	cagaaggacg	atcaagagat	gggtggttaa	gatttggaga	aatggaaaga	3780
gattgtatga	tatcacatgg	atctgcaaaa	atgttaaaag	aaagattatt	tgaagaaagt	3840
gatgcatatc	gtgtacatgt	atgtgataat	tgtggtttat	gttgattatgc	tgatattaac	3900
aaaaatgctt	atgaatgtac	tgtttgtaat	agtaaaacaa	acatatcaca	aattttatta	3960
ccatatgcat	gtaaattggt	attccaggaa	ttgatgacaa	tggctatcta	cccaaaactc	4020
gttctagaag	atgtataa					4038

&lt;210&gt; 353

&lt;211&gt; 2700

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 353

atgtataaaa	taaaaaataa	cgagagtgat	attaattccg	atgattgtaa	tgaaacagcg	60
caggaaatgta	tatatggatt	cagttctcca	aaaaagagta	gaaaggaatc	accaattttt	120
gtgcagaata	atgatgacac	ctgtagtagt	aacaatattt	atgaaaagaa	aacatgcagt	180
aatactagcg	caagcagtg	aaaaaaatat	gacaaaaaag	aacaaagctt	atgttctgat	240
ataaataatt	acaacaaagt	gaatattgaa	ggattaaaaa	taaatgaaag	gaattatgat	300
aggataaata	attctgaaga	agaaacaaac	attaacgatg	ataataatga	tgataataat	360
gggtgattatg	atgatgataa	taatagtgt	gatgatgatg	ataatgatga	taataataac	420
aatgatgata	ataataatga	tgatgatgaa	gatgttgacg	attttgaaag	tataaaagaa	480
aatgatgaat	ataaagatcc	tacttattca	gatatctata	aagaagcaaa	aaaatgcaat	540
atacgttggtg	aaaatattat	gaacagttcg	gttaataaga	agaatttaga	agaaataaat	600
gaatcggatc	ccctgaacag	ttcagataat	agtatgactt	catcatcaga	agaaagttgt	660
tctgaggat	cagataaaga	atcagataaa	gaatcagata	aagatggaaa	tttatatgat	720
gaggaattga	atgaaataat	agaagaagga	tattttaaag	aattaatacc	agctatacca	780
catgacatat	tacaagcata	tatatcttgt	ttaaaaatat	gtgggttttg	aagacaagta	840
caattacata	gattaataaaa	tttattagggt	gatttacgcy	atccaatatc	ggtaatacaa	900
atattaggtt	tacctgggtat	gggaaaaaca	aaagtagtaa	aaaattttat	aaaattaaca	960
aatgtacctt	ttgcttatgt	gaattgttta	atggcagttt	atcaatctgg	tagatcagca	1020
aaaaatgtaa	tttatcatac	tattttaaaa	gatttaagta	taaatcttct	taatgaattt	1080
aatgagtata	aaaaaataaa	taataataca	aattattctt	acgacccaac	aaaattagtt	1140
cctaatacatg	tttcaaatac	agataatttt	tttagtatat	tacataagct	tctttctttt	1200
aagccagaag	atatttctaaa	taataaaaaga	accacagaaa	atattaggag	cccttcta	1260
agtaataata	ataaaaaaaa	aaaaaaggaa	caaaatgata	gcacaggtaa	aaattcgaaa	1320
gaggaatgta	acaataatga	ggatgatgat	gatgataata	ataaaaacaa	atttcaataat	1380
aataaatgta	atttaatttag	atttaattca	aatacgaatt	attataaaga	taaattatat	1440
gatagatcag	ttgtattttat	attagataat	ataagatatt	tagttaggac	acatcctgat	1500
ttatttttatg	ctttaacaag	aatacatgaa	tatattaaag	gtccatataa	tgatgttaca	1560
aaagcaaaata	aaaccacaag	agggtttatgt	ataatattaa	ttaatagatc	tccattacct	1620



gatgaaatat	tcgatggatt	accgcaaccc	ccaactgttt	ggtttgattc	atatacatct	1680
gaaatgtgta	aaaatatatt	atatcgatta	tataattcta	tgtgctttga	atctttatta	1740
acataataatg	ataaagattt	aaagatttat	tatgtaaaac	ataataaaaa	tgaatttctt	1800
atcaaaagaa	atgatgtgat	cttagaaaaat	gatgtaatat	atgatatatg	gtgtagatat	1860
gtagattata	ttattaatgt	ttcttataaa	gattataaaa	gtgattttca	tgaattatta	1920
tttatatgtt	cacatatgtg	gccattatct	attaaaccaa	tattagatgg	agtattagaa	1980
cccatagtag	aaaatatgaa	tgcattacaa	agaaatatag	atacacatat	tcgtgttgct	2040
acataataatc	attctagtca	ttttactttt	gaattaatcg	attcagtttt	cttaaatgaa	2100
aataatttaa	aaaataaaat	tgatttatct	ttttattcta	aaattttatt	agtaggagct	2160
tatctagctt	caagaaattt	acccttaaca	gataaaagat	ttttcaatgc	aacagtaaaa	2220
ggcggggcat	ttacattacc	aaaaaaaaga	aaaggaaaaa	ataaaaatga	atctatttta	2280
acattatttaa	gtaaatccat	acctaataat	tttacattta	ttagatgggt	atgtttaaca	2340
gattgtttat	tagtttgctt	ttttgatgaa	caattaatat	taaatagttt	aatatgtcaa	2400
caaattaata	cattaatata	attagggttt	atctctttct	cttcacctaa	taatttgta	2460
tgtctagtta	gaaatagctt	aatgaatgga	gtacaatgga	gtggttattg	tggtagtgtc	2520
cttctaaata	caacaacgaa	tttttcatca	ttaactaata	atataatttg	tgaaactaat	2580
aactcgatga	cttatgaatc	tttagatccc	tacaccaagt	tggttattca	agtaccagag	2640
gaaactataa	gaaacatata	gaaggagatg	aaaatacctc	tagatgagtt	gataatataa	2700

&lt;210&gt; 354

&lt;211&gt; 306

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 354

atgataatat	ggtgtcacat	caaattgtctt	tgcacaaatc	ctggattttt	aaatgaaaca	60
tttcattttg	tgtcagataa	tacaacagaa	tatgacaata	acgtacaaat	gtgtaaaaaa	120
tgtaaccttt	tgaaaaataa	aagatctcat	cactgttctg	tttgtgataa	gtgtataatg	180
aaaaatggatc	accactgctt	ttggataaat	agttgcgtag	gtttatataa	ccagaaatat	240
tttatccttt	taaattttgt	gagaacaaaa	ggaaaatata	acactaatat	aataaaacat	300
ttatga						306

&lt;210&gt; 355

&lt;211&gt; 5994

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 355

atgataaaca	gtgataaaca	atgtatgaac	gataataagg	agagtattcc	gaaagaatac	60
aaaacacagg	atatgataga	aggagaaaaa	gaaagaaaga	acaagataat	aaaagaatat	120
ataaaaaata	tgaatgaaga	agattttctta	tatctaagt	aacattttaa	aataagaata	180
gataatgaaa	tatttatgtc	tcaagaatta	aatgactata	ttaataaaca	tattgatata	240
atatgtgaat	tacattttta	aaacttttaa	cgctcctaaa	ctcatatgaa	aaaggctctt	300
atcgatctta	ccttgaaact	taaatattta	agacatttgg	aatatttgaa	aagaaaaaaa	360
aaaaaagata	aagaaaaata	aagtaaaagt	aaaaaggaaa	aaaacaataa	aaatgagaag	420
gatgatgaaa	tggaaaaata	aaaggaaaaa	aacaataaaa	atgagaagga	tgatgaaatg	480
gaaaaataaaa	aggaaaaaaa	caataaaaaat	gagaaggatg	atgaaatgga	aaataaaaaag	540
gaaaaaaaca	ataaaaatga	gaaggatgat	gaaatggaaa	ataaaaagga	aaaaaacaat	600
aaaaatgaga	aagatgatga	aatggaaaaat	aaaaaggaaa	aaaacaataa	aaatgagaag	660
gatgatgaaa	tggaaaaata	aaaggaaaaa	aacaataaaa	atgagaaaga	tgatgaaata	720
aaagaaaata	tggacaaagt	catggaaaaat	caattaaatc	aaagtaatat	attatataac	780
aaagatagaa	taagaaaaaa	cagaaataat	ttaaaagatg	aaaaagatgt	atcaaataaa	840
aataatattgg	atgataataa	agatatagtt	gaattcaaat	tacaagatat	atcatcagga	900
tactctgaga	catcttgtaa	atctacaaat	tctatagaaa	atggaaattc	ttcatcaaca	960
tctagctgtg	atgatgatag	tagctttttt	ttttcttggt	cttctgattg	tgatgaagaa	1020
acatcggacg	aagaaatttt	gtcaacaata	cattttgatg	aaaaagaaat	gtctacatta	1080
aaaagtttgg	aaaaagctaa	aaatgtatat	tttgcttata	taaataagaa	atttataaaa	1140
tataatatat	tagatcattt	taatatgaat	ttccttgaac	gattaaatta	ttatttttcc	1200
aagtttatatt	accaaaaata	taatttataa	caaacaaatg	aatatcaaaa	tagaataaaa	1260
gaatttttgt	caaatgagga	aaatgtcaaa	aaaatcgaat	taaatcaaa	taaattaaga	1320
tctgatattt	taaattccat	gtttggattc	catattatta	atgaaacaca	tccaatgaaa	1380
ttaccaataa	aaaatatgaa	caacttatct	tatcaaaata	caaaaagtaga	taatatatat	1440
gcttataaat	caaacacaaa	taaatgtcgt	gtgcacacaa	aacttaata	gctatatgaa	1500
actaatgaca	atataagaaa	tatgaattat	tataaaaacta	ttgaatatat	gaattcggaa	1560
aataatataa	ataatatgaa	catttttaaa	gaatggacaa	attttatgga	tcaaaaatata	1620
aacattgaat	caatatctcc	agaacagcat	aaaaaaggaa	atagaaaaaa	aaaaattaac	1680
acaaaaaaat	tatatcacca	tgataattac	aataataata	acaataataa	taacaatgat	1740
aataacaatg	ataataacaa	tgataataac	aatgataata	acaatgataa	taacaatgat	1800

aacaataata	atattaattg	tatatatgga	gaacatcata	atgtgaaaca	taaaaaaaga	1860
aatcaacat	ctaaatccaa	acacattttt	aggagtaatg	aagtatccat	acattttta	1920
gatgatataa	aaaaaattga	acatgttgca	aaaaaggaat	tacaagaata	tatcaaacaa	1980
attcataaca	aatcaaaaat	tcataacaac	atatctagct	tgaacaata	tatgttaatt	2040
tcaaattgga	agaactaac	caaacataat	aattacatga	ccttattatc	tgaagaaaaa	2100
aaaaggaatt	ccaaaatatt	ggcaaattta	tgttataacc	aatgaaagc	tatagatcaa	2160
aaacgaaaaa	ttatcctaga	aaaagaagaa	agagaaagaa	tgaattattt	aaaagataat	2220
gatatagaag	ttatatgaa	gttaatttaa	acagctaaaa	ataaacgttt	acaagaattg	2280
ttagatgtaa	ccgaacaatt	tttaataaat	atgtccaaat	gtgttttata	ccaaaaaaaa	2340
gaagcatatc	agaatcatc	agaacaaaac	ttccatggtc	ttataaatca	taaaaatgaa	2400
gacaatgaaa	aatgtcataa	aaattataat	tcgaaagaca	ataataatat	tcttcaaagt	2460
gtacataaatt	taacaacaca	tggacaacaa	aatggatata	acaataaaaa	aggttatgac	2520
acaatgtatg	aacataatga	aaacaatata	aaaatatgta	attataaaaa	tgctagagaa	2580
aattattata	atataatctc	tgttgtttaa	gaaaaagtaa	aacaaccatc	cattcttata	2640
gggtggagaat	taatgaaata	tcaactagaa	gggttagaat	ggctagtttc	tttatataat	2700
aataaatttac	atgggtattct	agccgatgaa	atgggtttag	gaaaaactat	acaaccattt	2760
agttttatttg	catatttgaa	agaattttaa	aataatatta	acgttaaaaa	tttaattatt	2820
gtacccttat	ctacacttcc	taattggatt	agcgaattta	atagatgggtg	tccatcattg	2880
aatgtttataa	catcacagagg	aaataaatta	gaaagaaaac	atattgctaa	aaaattatta	2940
gaacaaaactt	ttgatatatg	tattactaca	tttgatttag	ttataaaaga	gaaatcattt	3000
ttaatgaaaa	tatcatggaa	ttatatagtt	gttgatgaag	gacatcgaat	gaaaaataat	3060
aaatcacggtt	ttcatgtatt	cttatcagaa	tttaaaagta	aatatcgtat	actattaact	3120
ggaactccat	tacaaaataa	tttatcagaa	ttgtggtctc	ttcttaattt	tcttttacca	3180
aaaatatttt	cttcatgcgt	agatttcgaa	aaatgggttg	ttaaatcatt	acataacgaa	3240
aaagacgttt	atgaacatat	tacagaagaa	gaacaacttt	taatcataaa	cagattacat	3300
agtgtactct	taccttttat	gttaagaaga	gttaaaaaag	atgttctaaa	atcattaccc	3360
aaaaaatatg	aatataatat	acatattgaa	ttatcactat	atcaaaaaat	attatataaa	3420
caaatacaaa	ccaaaggatt	caaacaagtt	aatcataatg	gttctataac	aacaaaaata	3480
tttcaaaata	ttgtcatgca	attaagaaaa	attgttaatc	atccatactt	atttttatat	3540
gattataaca	ttgatgaaaa	tataatttaa	tgtagtggga	aatttgaagt	ccttgatcgt	3600
atgctaccca	aacttttgaa	atttaaacat	aaagtcctca	tattctcaca	gatgacaaag	3660
cttatgaaca	ttctatgtga	ctaccttgaa	tttaggggat	ataaatatca	tagactggat	3720
ggaaatattg	gactccaaga	gagaaaaaaa	attatcgacc	aatttaataa	taattgtgaa	3780
tataagaagg	atgaaggaaa	acagccaaat	tgtgaaaatgc	ctggtaatga	aaatgtgaac	3840
atgtcaggta	atgaaaatat	gaacatgtca	gttaatgaaa	atatgaacat	gtcagttaat	3900
gaaaatatga	acatgtcagg	taatgaaaat	atgaacatgt	caggtaatga	aaatatgaac	3960
atgtcaggta	atgaaaatat	gaacatgtca	ggtaatgaaa	atatgaacat	gtcaggtaat	4020
gaaaatatga	acatgtcagg	taatgaaaat	atgaacatgt	caggtaatga	aaatatataa	4080
atgataagta	gccaaaatga	aaaagatacg	agtagccaaa	gtgtcaaaa	atccgaactc	4140
aaaaaggaag	aaattaatga	cttccaaatt	atggacgaca	aaaacgtcaa	tgggggaaac	4200
caagatgcaa	tgatatattat	tctgtctaca	agatcaggaa	gtttgggttt	aaatttacag	4260
acagctgaca	cggtataaat	atttgacagc	gatttttaatc	ctcatcaaga	tattcaagcg	4320
atgtgtaggt	gtcataggat	aggtcagaaa	aatgtgggtga	aggattttcg	atttattaca	4380
ctatcaggag	tagaggaggtt	ggttttttaa	aaggctcagc	acaagctgag	tataaatgat	4440
aaggtaattc	aggcagggtt	gttttaataa	atatataatg	atgaggatag	gcagaataaa	4500
ttgaaggata	taattcaaag	aaatcaaaaa	aatgatatga	caacgcattcc	tactaatcca	4560
ttattattaa	attattatat	gaagagggaat	gaagaagaat	tggaaatattt	cctcgatttc	4620
gataaacggt	attttgggga	gcaatatttt	tcattattaa	atactttgaa	tgtagaaaa	4680
gtagatagtg	gacagtttac	ttatatgagt	gaagatgaga	aggaagaaaa	tgaacatat	4740
ttgagctcaa	ttataaaaaa	ggaaaaaaaag	gaagaggagg	gagaagacga	tgaggaaaa	4800
caaaggggata	ggaataaaga	agaagatcaa	gatgaagata	aagatgacga	taaagataaa	4860
gataaagata	aagataaaga	agaagaagaa	gagaaaaaaa	gaaaacacat	attgaataat	4920
aataataata	atggcataca	aaatggaggt	agtataaatg	aaggagttaa	agagaaaaata	4980
ttggatgaat	attgtaataa	taataactaaa	tgcgtaaagg	tatcaaacga	gcgattaata	5040
tttaagagaa	aacatgatac	tgatgattta	caatgtgaag	atgaaaaaat	aaaagaaaa	5100
gaagagtgtg	atgtggataa	cataatacaa	aataagaata	ataaaaaggt	aaaaatggaa	5160
tgtcagaagg	atgataagga	tgatgacata	aatagtaata	tacatatgga	tgaaaaaaaa	5220
aagattttaca	tgtcaagtga	gaaagatgat	acaacaaagg	aatattcaga	tacctatgat	5280
ccatatataa	atgacaagat	gcaagtaaaa	gatgaagaag	attattacgg	ttttatttta	5340
aaagaagaaa	atcaaaaacga	tatagaaaag	atattaatta	aaagtaataa	attaataaat	5400
aaagatgaat	taccagctta	tttattttat	gatgatacaa	atgattctcc	agataagata	5460
aatcttaaga	ggtcacgaaa	agtaataaat	attaatttga	tgcaagaaga	aaaatttaaca	5520
gaaaagcaat	ttcttaagtt	gatcgattca	tcacacaccta	atttattatc	gagtgtagaa	5580
aaagattttag	gtagaaaataa	aaaagatata	gtaaaatctg	acatggaaca	taacaatgat	5640
ataacaacat	tagaagaagt	aaaagataga	gaagagataa	aagaagaaca	tcttgagaca	5700
acaaaaaaca	tatcatcatt	aaatataaac	gatttagaaa	ttaataaaac	tctaacaac	5760
gaaaaatgttc	atagtacaaa	aaaaagtcct	tataatatga	gaagttctaa	aagaagaagt	5820
gacacttcat	caacgtatat	ggaaacaagt	ataaaaaaga	gaaatgacaa	agatattcac	5880
atatgtttga	aaaagggaaa	aaaaagaaat	aatagtatgg	agcacactaa	acaagaatgt	5940
catgtggatg	atgaaaataa	gaaaagagtt	aaaaagagaa	aaagttccca	gtaa	5994



<210> 356  
 <211> 3549  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 356  
 atggacatac aaagaaaaat taaaaaatgc ataacttttaa aaagaaaatt aaagaatcca 60  
 aaaggatgtc ttacaaatct taagaataag attataaaaat gtaacgtaaa ggattttcaa 120  
 agtacaagga atagatatatt ttttaataata ttcgagaaaa taataaagag atatatattt 180  
 aataatgtaa tgaataactaa tagaacaat aatttttggt tagaaaatat atcatgtaca 240  
 caatatgata agataaaaaa ttttccttat acatgtcata atataaaaata tgatatacat 300  
 agttgtaata ataaacatat atatgataac aattcttata atataataaa aaaaaataat 360  
 atggatcttt cttctttttt aaaaaatatt atttttaata taaattattt gttataccta 420  
 tttataaaaa acaatcgcat ttattttgat ttacacgtct tatttaaaaa tgatttatta 480  
 ttacaaagaa atataaatat atcctatgaa agcaatatag ataatatgtc tagggagggg 540  
 gtacatcata aaagagacat attaattaat acacaatgtt tatataatat taatgatttg 600  
 tttgctttgt ttatatttta tgttcattat aagagatttt atttcgactt tttttttaca 660  
 attcttaaaa acattaatga tatggaaagt acaaatgatt ataaaaatgt atgttatatg 720  
 aacaacatac ataagggaaca tatttatcat atttttcac acaaaaatta ttataacatc 780  
 caaaatatga acagtgaata ttgcctaaaa tttttaaaag cttgtatata attaaaaaat 840  
 atcatctcca atattgttaa tataaataag aaaaaaaaag aaaaaaatgt tacaaccat 900  
 cagaataata tccgaacatg tctgattaat tattttgtat ttattaaaaa tgccatattt 960  
 aaaaaatgca aaattataaa aaagaaagaa aaaaaaaaaa aaaaaaacga cgaacaaata 1020  
 tatattaaag catacatcca taatagtgtg tatacaaata tttttaagga catgttattg 1080  
 cacaacataa agatagagag aaaaaaaaaa aaaataaata ataataataa aataataaat 1140  
 aataaaataa taaataaaaa tataattgaa ttatttaata aaatataaaa atatgacgta ccataagttt 1200  
 tatattcatt tttttttttt aaaaaaacaa atatatataa aatatataaa taaatccata 1260  
 aaaaagagaa aagatatgaa cacattaata atgtgtgata aatatataaa gaaaattatt 1320  
 tgccttattt taaataattt tcaagactct tctattttta taaagtatat gattattatt 1380  
 aaaaaggcaa acataataaa ttatttatat gatgatcatg tttttattaa gtcattaatg 1440  
 aaatgtgtta aaaagaattg tgcttatttc acaggacagg atttgatatt tatatataaa 1500  
 tggaaaacac atatgaataa tttggataat ataaatcaac ataataataa atataaaaa 1560  
 aaacataata acaatatgta tattaaaaca gacaaggtaa aagataacaa tgccttattt 1620  
 cccttctctc ataaaaaga tgatatattt cgacacattg aagattacca ttttcatcat 1680  
 ataaaaagata ttatatatat atgtttacaa aacaaattgt atgaatataa attattccat 1740  
 aaaattatta accatttaat aaacaatata aacaaaatat gttctaaata tttagtcaca 1800  
 ataattatac ttttggtataa caaactaaat tgtaaaaact agttaaaaga actgttattc 1860  
 atcttattaa ataattatag accatcctta aaacaaagaa ataaaagaaa taatatatca 1920  
 ataaataata tctattttaa aaatataaat aaaaaaatata aaaaaaaaata aaaaaaaa 1980  
 aaaaaatata tatatattta tactatatgc aaaaaaaaata ataattgttg taatatcac 2040  
 aaacataatg ttatgatgac atctaattcat aacaattatc tatttagatc ctttgagtat 2100  
 gtaaaagtac acaaattatt attatttata aatatattta taaaaagtaa tatatatatt 2160  
 aattatgaat ggtcccttta ttttttatct ttgattaaac agaaacatgc ttttataaaa 2220  
 aagaaagggt tctatatatt atgttatata ttatttcata tacaaaataa tcatataata 2280  
 tataagtctt atgagcatat tttcaatcct tataataaat ataatatata taatatatat 2340  
 aatataataa aatgtactct acctcaaat tttaggtacat caaatatata ttcattaata 2400  
 tatgtagcct ttctatatag cactaataac acaatcaatt ttataaaaat attttttaca 2460  
 ataattcaaa aattttatga ttcttctatg atcaaacaaa tacaattga caaaaataat 2520  
 tatcaacata tatcatgtca taattatagt cctaagaagg ataattcaga atattatata 2580  
 ccagatgatc ataacaagtt attatataat tactcttata atcaactata tgaaaagaat 2640  
 catttttaatg atgacaatat ttttatatat gatttaaaaa tttatgaaag aaatattaat 2700  
 aataaatatc aaaaaataaa agataaaaaa aaaaatatat cattcaaaaa taaaattaat 2760  
 ttaataaata taccattaat atgtaataat gtaaaagaac atttctcatt taatccatat 2820  
 gtcaataata taaaatatca aacacgaaca cccgaaaata tttccaatt aatgtatata 2880  
 aataattcac aagaatttca aaatacacag aaagataatt ttccacatat attaaattat 2940  
 tctctataca cacatatcaa aaataatcct ataaaaaaa atcaaacaaa taatctttat 3000  
 attaaaaatg attattataa tcaacaagaa aaagaatatg acaagtcagt tataaataat 3060  
 aaatttgaaa ctatcaataa ttattataat atatatcac ataacccttt taatcgtgtt 3120  
 cataaatctc gtttaatact tatacttata tatcattttt tatttattat tagttcaaat 3180  
 aatttacata ataataacaa caacataata tataataata ttaataatat tcaaaaatca 3240  
 aattctgtca atacaaattt tacaatatata aaagaagatt ctctcttata taaaataaaa 3300  
 aataaatatc ttttcttggt gtatcaaaca tatatgatat gtatatctta tataaacatg 3360  
 tcattaaaaa taaccaaaaa tatgaataat aataagaacg cccagtcgtc aaaaatgcac 3420  
 aaacaaatat tctcccatat atcggaactt gtacaaaata aagataaata ccatatggtg 3480  
 aatgaatatg cgcactatcc ttatgagata gacatatgta taaaagggt catcacaaa 3540  
 aataaataa 3549

<210> 357  
 <211> 642  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 357  
 atgaataaga ataagaagaa gaaaaaaaaa accaaccacg taattgtgga aaatattcaa 60  
 aaagaatggt catttggttt aaaaaaggaa aataacgaca tatatgtag taataacaaa 120  
 cctatacaaa tatataacga tagaattatt aaactattaa atgaaaggac tcataaaaaat 180  
 gttgaagaaa ttatagaagg agattataaa gatttaaaaa aaaacaaaata tattaatgac 240  
 acagtttata tacatgctgt tgggtataaat atactaaaag cctcttatat aattcaagat 300  
 cttttttctt attatcatga gtttgtaaaa agtattcaag aacctacaat atcacataat 360  
 aaaaaataata acaataatat tctagaaaaa aaaaaaaaaa aagaagaaaa aaaaaaaaaat 420  
 cctttaagat atatagatat tcatattgaa tgtaatacac tcatcatgaa cgacaacatt 480  
 ataacaaata tatatgatat ggatcaacat tttaatacata ataagaataa tgatgatgac 540  
 aaaagtttct atgatgaata cgataacttg ataaaatttg catccatgaa atatgaccct 600  
 ctcaagcaca aatattttaga ggttcgaaaa ttaaaaaaat aa 642

<210> 358  
 <211> 4056  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 358  
 atgttttatg tacctcaaaa catttcaaac atatccaaca gaattaataa atataaaaata 60  
 aattacttga caacatgtag aagttataat aagatattct gtttaataca taagtcgata 120  
 agtagttcta aaagaaatat aaacaacata agaacagtgg atacatttac ggataaacia 180  
 atatatgatg aacatgttaa gttgctgaaa tgtgttttaa gacttgaaaa agattttctt 240  
 tttattttta agagtaagaa aaataaagaa tgtgttataa attctaataa tatatattat 300  
 aataaataata ataataatat cataaattat gatcatagta caaaatataa tgggtgataat 360  
 ggtgatgatg atgcagctat tgagaaatgt agccgcctt tacttaatac taatgaaaag 420  
 aacataaaaa aaaataaaat tttattatat aataagataa agaaattaat agataaaaaa 480  
 tgtaataata taatgagcat attattgaat aaatcatatt ttacagtatt attatcatgt 540  
 gttaatatata taagaaataa agatattttt aatatatttt tgtttaaatg tttatatctt 600  
 aataatcaat ggatacatat attaaattat aacatggtag tatctctatt tttaaacgta 660  
 tctacattat atttgtgaaga agaaaaataa aataaatacc gtaatacgtg tcataagcgt 720  
 catccgtatc atattttta atataacttt ttatgtatag aaaacatttg taatgtatat 780  
 aaaaatatac tacaggttat tataccactt cttataatat gtgataaaaa actggatagt 840  
 acgctttctt ttaataactt gattaaaaa ataattatgt tttttaaaat tcataagcga 900  
 aatgctcttc tcgttacgca tagtaataa gaagagtga ttatacacaa gcgaatatct 960  
 tttcttatct ataaaatgaa taggggaaat aataatatcc aacatgatga tataaataat 1020  
 gagacgaatg atgttaaaaa taatatatat ggtaggaaaa aaaaaataa aaacatatat 1080  
 ggaaataata ataataataa taataataat aataataaac atatgaataa atcaattagt 1140  
 acaaacatat taacaaataa tataaaaaat gaacatattg ttacaaaaca tgttattaga 1200  
 acagatgaaa aaaagaagga attgttcttt tgtacatttg tgaatatgac tacattatta 1260  
 tatgaaatca tcttgtttta taaaacata tcaacaaata atataaaaaa aaattatgaa 1320  
 tatatagatg atacatggaa taatataata accaatataa taatatatat aaaaaataat 1380  
 atacctatgg aaagaataaa aaaggaaaca catttacaat caataatctc tttattatat 1440  
 agtttgactg tattgaatta tagcaatta tatgaaaaca ttttttatat atttgaaagg 1500  
 tctgtcgata ttatacatga cttttttaaa cataacatga ggaaaattaa tataatgaca 1560  
 tttgatgaat tgaaaaatga tttgaatggt tcgtttgtta atatgtgtaa tgatgataat 1620  
 aataataata atgatgatga taataatggt gatgatgata ataataataa tgatgataat 1680  
 aatgggtgatg ataataatga tgataataat gtgatacaat ataaacattc caatgtggaa 1740  
 cctaaaaaat ataacaagg taaaatataat atgtataaca catttcatag aaacataaaa 1800  
 tttaaatata aacaaaatat agtacataat tatttgaata aaatagatcc acttctttat 1860  
 aataattttt tattcgttta tgttctgat ttattatact cacaagataa ttgtacagac 1920  
 atgtttacgt tagatgagtt aacaaagcta ctatatgctc tttcatatta tcagaaggaa 1980  
 atagaaaaac aaaagaaaaa taataaaaga aaaatatatc atattaaaga tattattata 2040  
 tctttattac cttatgtcaa cactatagtt aaacgacaaa tattcaaatt gcttgttaat 2100  
 aaaaataata atatatgtag taaaataaaa aacatagaaa catgtaatct aaatatatat 2160  
 aataacgtag atcctgttgt atataaaaaa aaacttgctg tgggaaaaat ggaaaaaaat 2220  
 aactatgata agaatacatg ttctatatta tcatcttata aaaattatct taatatatgt 2280  
 aatgataata catatgtggc tcattcctct atctattgta ttgaaaaaaa ttttaagtc 2340  
 ttgttaaata tttattacca acacaaaatt gtagatatta aaatgttcta tatcttaacc 2400  
 tttttattag ctatgccgaa aaaaaagtat atagatttaa ttatttttag taataataa 2460  
 aatgccttat ctaaaatgtg ttatacatat gaaatgtatg tgcgtctttt ttttttgtt 2520  
 aataaggtat gcggaataag aattagttaa tatgtcttaa gtaaatattt ttttagaaac 2580  
 gggttggtgt taaagactgt tgaagaggag gaaaaagagg aagaggaaga aaaagaaaa 2640  
 agaaagagg aagaggaaga agacgaaaa gaggaagaag aagataaaga gaaagaaaa 2700

gaggaagaaa	aagaggaaga	aaaagataaa	gaggaagaag	acgaaaaaga	taaagagaaa	2760
gaaaaagagg	aagagatcca	aaaaaagggt	aaaaaagaaa	tccaaaaaaa	gggttaaaaaa	2820
gagaaccaaa	aaaagggttaa	aaaagagaac	caatatgagg	aaaaaaaaaa	agggtgggtgct	2880
aataaaaattc	ttccctttta	tatttgaggaga	tcgttttttaa	aaaatataca	attttaatgta	2940
aaagatcaac	atatgtttaa	tagtttagtt	cctgcatatg	tatgcaaggg	gtcagaagta	3000
aattttctcaa	ggaatagaaa	aaataattat	agtaataata	atgaatcatc	tgaaaagata	3060
gatgtgtata	ataaaacata	tgaaataaaa	aaaaataaaa	atatgtataa	aaagattagt	3120
agtaatgata	aatatatgtt	taagaatgaa	aaagaaaaat	ttaattttat	ttgtctgaat	3180
acccttctga	attacatgag	ttatacgaat	gatatccaat	attataatat	aaaagttcat	3240
ttaataaaga	tgataaaaaa	tattataaatt	aaagatgaaa	aaaagataga	tgtagatta	3300
ttatgtagta	tatttataag	ttatacaaga	ttgaatatat	atgacaagat	attattttat	3360
aatattttata	aaaaattaca	aacccaaaaa	ttaaattttg	gaaatattat	aagtatcctt	3420
tcctatatga	ataaaacggc	aatatatgat	aaacatat	tatttacatg	ttgtaaaagt	3480
atatttataaa	aaataaatga	taaaaatata	atacaaaaata	atcaattatc	acatttaatt	3540
catttcttat	ttatattaac	atccatatct	caattatttt	tatttaacaa	atttcatatt	3600
gttttatcat	atataatttag	gatactttat	tatatattatg	tttatataaa	taatcaacta	3660
ataataacaa	aaaaaaaaaa	aaaaaatcaa	tcttttcaac	atgttaatat	aaacatttct	3720
tcagtaataa	caacaccatt	accaaagaac	tttatttcaa	tgtttgacat	aagcttaaat	3780
attcctttatc	actttttttt	attaataccc	ttacataatc	ataagaatgt	aatcgaatgt	3840
gtcaacatat	cacacctgaa	tattcttaatt	tcggttattat	cttacaataa	taaacacaaa	3900
tatcacgttg	ctccaacacc	ctcggatata	caaagaagtg	tactaaacat	agtaaacaaa	3960
atgctccttg	gacatggaaa	tataaaggta	tcttacgagt	ataaaatgca	taacatgcct	4020
tatcaaatag	acattttta	aataaagggt	gtttaa			4056

&lt;210&gt; 359

&lt;211&gt; 2169

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 359

atggagaata	atcctttacgt	gtttaaaagc	ttagttaaca	tttatgagga	atattttaa	60
ttaattatc	atcgtgtgaa	gggatataaa	gtatttagtgc	ttgatgatga	aacgaagagt	120
atttatcgt	tgattttttc	acattcgtat	atattggaga	aggagatatt	tttaacatta	180
aattttaatg	ataagaacat	atttgaagat	atatataata	ataataatga	taagaaagaa	240
aattttgatt	ttatgaatta	taagataaag	aattttaa	atgtgaaagt	tatcttttta	300
ctaagaccta	cctatacgaa	tatattaaga	ttaatgagt	aacttaagaa	accgttattt	360
tcagaatatt	atatattttt	tacaaatata	ataaatgata	tatatataga	gaagttagct	420
aaggcggatg	agtttgatgt	aataaaaaat	ataatagaat	atttatattga	tacatatgta	480
ttgcatgatt	atttatttca	tctaaatata	gactacactt	cctttttata	taagaatgat	540
cataaattta	tagacaaaga	aaagaaaaaa	aaagagttaa	attattttta	gcaatataat	600
aataataata	atattaatag	taataataat	tattctagt	atgggtcgta	tgaaaagcta	660
accattgaag	agtttaacaa	attagaagga	aataataata	tgatatatga	taataataat	720
aataataata	ataataataa	tattaatagt	ggtaaatata	attatagtca	ttttaattta	780
tctattgaac	atattaataa	cgataatagg	aacaattcaa	atataacgct	tttatgaa	840
caaatagttc	aacgaattat	cgatggattg	ttttctttcc	tttggtgtat	aagacaagtt	900
cctgatgtta	tttataacag	gcattctaaa	atatgtaaac	atattataga	tatgttaaaa	960
gaaaaaatgt	taagacatca	atctgtattt	aataatatat	tagatatata	tgaaaaatat	1020
aatgatgaaa	tggagaggaa	aaaaaagaag	aagatattag	aaacaaataa	tgaacctaat	1080
taccaattta	atcattttaa	aaatcaaaat	atacatgaga	taacagaagg	tgatgcttgt	1140
tattttttta	tttttagatag	aaatgaagat	cctataacac	ctttacttac	acaatggaca	1200
tatcaatcta	tgttacatga	acttatagga	atagaaaata	ataaaaataa	tttaaatgt	1260
aataataaag	aagaagaaca	acaacaaatt	gttatgtctt	gtaattatga	tgatttttat	1320
aatgaacatt	tatttgataa	ctttggagat	ttaggtcagg	ctgttaaaaa	ttatgtagat	1380
atttatcaag	aggaaacttc	aaaaaaaaaca	aatttagaat	ctattgatga	tatacaaaaa	1440
tttatagata	tatatccaaa	ttataaaaaa	ttatcaggaa	atgtaacaaa	acatgtttaa	1500
attttacaca	aattttctga	tatagtacaa	aaaagacaa	tattttatat	ttctgagtta	1560
gaacaatcaa	tagcttggtta	tcatacaaaa	aatgattcatt	ttaaacaagt	tattgtact	1620
attaaaaatt	atacctatac	taattatgat	gtcttacgat	tatctttatt	atattcttta	1680
aaatatgcag	atgaacaaca	tatcaatgtt	ataaaaaatg	aactagctaa	aagaaatata	1740
caaaaagatc	aaattttatt	aatagatgct	ttattattat	attctagtca	acaaacaaaa	1800
tataatcaat	tattcaaaga	acaaaccttt	ctaaacctag	ccaaaacaac	tattacaaga	1860
actatcaaag	gaacatcaaa	tgtattttaca	ttacataaat	cttatcttta	ttattttata	1920
gaagatatata	taaaatataa	aattaatact	caattatata	caaccacaaa	cttggttacac	1980
acagaaccta	ctttgaataa	aaaaatcaat	tccattgtcg	ttttttttat	aggaggtgct	2040
acatatgaag	aatatagaga	tgtacaacat	ttgagtaaaa	aatataacat	atccattgtc	2100
ttgggttcaa	cgcacatgca	taattcacag	tcatttcttg	cagacgtttt	gcagcttatc	2160
aagaaataa						2169

<210> 360  
 <211> 4197  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 360  
 atgatatact caagggttaaa tgaaataatg aaaaaaaaaa aaaaaaaaaa aagaagaaaa 60  
 aaaaaattag taacaaatat accattatgt aataataatt tttcttattg taaagaaaaat 120  
 caagaaagat ttatatatta agacacatta aaaaaaaaga aattattcaa gaaatccatt 180  
 ttgaaaaaga taaaaaatca aaaggatctt atgaatatga tacatataaa aagtaagaaa 240  
 catcaactta ttaattttct tttcttattat ataaaaattta taaaaccctt attcaataaa 300  
 aataaatatt ataataaatc tttatatata aatatgaaaa tagtagttga tataaatgaa 360  
 aatgtgtgca tatataatga tcattatata tttgtttata taataaaaga ttacaacatt 420  
 tatgagagat taaaatataa aaatttttaa tgttctcttt tttcatctga tcatatgttt 480  
 tatttaagaa aagaaaatft ttattttttt tacacatttt attttgaatt gtttataaat 540  
 agttattttat ataatcggtt tgtgtgtttg aagaaatata acgataaatg taagatcaaa 600  
 aaaaatgaag aaaattatga acaggctgat gaagatgaag aaaaaaaatt tgtacactat 660  
 aaaatagggg gaaattatft tataaatgat gaggcagacc atatgaaaaa aacaaaaatt 720  
 ttgatagatt caaatgaata caacaaaaat tatgtaaata tattcaacag tacatttgta 780  
 tataaaaaatt atatggacgt tgaatgtaca aacacgtttt tacataataa taataataat 840  
 aaatatgata ataattgtaa taataataat aaatatgata ataattgtaa taataataat 900  
 aaatatgata ataattgtaa taataataaa tatgatttatt attatagcag tgaacaatat 960  
 tataaattcc ctctctctgt taatatccaa ataaatgttg tagaaatatt caattttgtg 1020  
 tgcactgaaa attctgatga tataaacgtt attttcaaaa ttaaagatga atatggaaag 1080  
 aaaagacgtg ctcatacgaa taggataaat actgaacaac aaaaaagag agattctaatt 1140  
 aaaataataa aaagaagaaa taataggaat catcaataaa atactcctaa tcaattatcc 1200  
 aataatatga taataaaaaa aaaaaaaaaa aaaaaaaaaa atcttatcat gaaaaaatat 1260  
 cttgttatag gaacaaaaaa cgggaatgatt ataattaacg atttttttaa acctcataaa 1320  
 ataatacatt tagaaaaaat atgtaatgaa cccatcgtgt atatttttta tggatattca taattttgtt 1440  
 gatattgttaa tattaaatcg ttctggcatt atatttttta ctggaacata aaacaaaaaa tttatcatat 1500  
 atatataggg atattgatatt atttttttct ctggaacata aaacaaaaaa attctgaaga gacaacacaa 1560  
 gaaaattgta ataataatat taaaaggaat tgtacgtata attctgaaga aaaaatacgt 1620  
 tttatcaatg gtaaaaaaat atgtaatggt aaaaaaatgt gtgatggtaa aaaaatacgt 1680  
 gatgatgacg aaacattttga ggatagtagc aatttagcgt accatcatag taataactta 1740  
 ccatgtgata cttttgaggg taaaagaatt gtaaacggaa tgtgtaataa gaaatataat 1800  
 tatgattata aagaatcata tagaacgttg aaaaagagat acataaattc attttgtcat 1860  
 ttgaattgtt atacaatat gattggaaca acttataatg aaataataat atataattta 1920  
 ttatgtgacg agttatgtta tatatatgat aagaataata aaaaaattag ttcatataat 1980  
 atacataata ataattattat atatatgata gaaaattggt tgtacaaaat gaacttaaaag 2040  
 aattatgata caataaaaatt attatgtcta cctacaatat atatttagttc atttgttttt 2100  
 tattcagata atcttctgat atgtggctcg tttaagggga acctatatatt tatcgatata 2160  
 tgtaataata ataacataaa aataataaat agaattagaa aagaagattt cgtaggaaaag 2220  
 caaagaatga ggatacataa agagaaggaa attctttttg tttttaagaa aaaaattata 2280  
 aataataaat atataataaa taagaccaa tctgacaata gtgtaaaaat atataatgag 2340  
 caagatatga aaaagaataa taaaataata agtatacatt taaataatac taaaaatata 2400  
 ttaatatggt cctttacata ttgtatatat atatataaat taaatatatc ggggaatgaa 2460  
 aaaattgatt taagatgtat ttcttatctt tcaataaaaa atattattca tatccatgtt 2520  
 ataaaaaata tggataattt attttatatt actacaagag atgatgaaaa aaaccaacaa aatggagcct 2580  
 tataattatt atttatgttc catgaatcct tgtaaaaata aattttttta ttacaatcat 2640  
 ctatatttta atatatatt tgagaacact tggttttatg aataattgga atgatgaacg aaagaataaa 2700  
 aaggatgaca accagttttt gtttgtcgaa aataatataa catattgtat aaataaaagt 2760  
 agtttaatac ttttagatga ttccatattt ataatatata ttaagaatgt taacaatacg 2820  
 agacaatctt tcgaggatac ctattataag caaaataatc ttatgaatgt taaaaataat 2880  
 tcacatgtta ttaagagaaa tgagtacata ggtggttaagc aaaaaatata taaaaataat 2940  
 aaaaaataatg aaagcactgt taatacttct tgtgtgatt atctaggctc aacaaatcaa 3000  
 gtaaaaaaca cgtttccttt taatcataat aataataata agaagaagaa caaggaaaaa 3060  
 aaaacgaata ttattcatgg taaaagaaat gaacaaatgg ataattcatt taacaagttc 3120  
 ttatcattaa tacatacaaa taataattct aaggcacatg tatcgaataa atcaaaaaaa 3180  
 tatgataaaa taaaaattgt aaaacatatt cctcaagttg taaaatcatt taaaagaaga 3240  
 acgaatatgt gcaaaatgga taatagaaaa aaggacatat cattgttaag tatcataaaa 3300  
 aacaaggaag aaaaaaaaaa aatacatgac attcatataa atggagaatc atataatgta 3360  
 gtatccaaag gtgtttccat tcccgttatg ttaaaaaata aattgttaaa cgtagatac 3420  
 gaaaaggagc atttaaaaaa aaaaaatgaa gaaaaagaag attgttcaaa agatgaattc 3480  
 ttaaaaaaaa tgaaaataat aaaaaaaaaa aaaaataata ataataataa gaataattac 3540  
 aatcattacg taacatataa attgttaaaa agtatgttga aaagaaaaaa gaataattac 3600  
 ttgtgtgaga gtaaaaaatt gaattgtaaa cacgatgatg atattattaa aaaagatacg 3660  
 tcatttataa gaagaggaat taataatgaa tctgtatata gagatgatat ttatttagga 3720  
 ataaatgaaa aaaatgaaat ccaaagaaaa aatttttaac ctaatatgta agtaataaaa 3780  
 gaaataatag aaattgaaca attttgtaat aggggggggtg atttgtgcgt gataaataat 3840  
 aatgaaataa ataatttgag ttattgcata aataaagaaa caaaattaag aacaaaaggt

ttaggatata	tacagaatta	tttgaagaaa	tatatgaata	cagatattaa	gatgaaaggg	3900
gaattccgag	ataacataaa	tcgttcttct	aatagcataa	aacatataaa	tagtaattta	3960
tataaaataa	gtccacaaaa	cagtgatata	actaattaca	tgggagaaaa	ggacaaattt	4020
attaatagtt	atcatgtgaa	caattatgtg	catagcatga	tgataagggt	accacaaagg	4080
gagagcgta	catatatcga	aaaaaagaa	aaaaacaaaa	ttgatataac	aaaatataat	4140
gcttatacga	aattaattaa	aaaaggagaa	ggtgataaaa	aaaaaaattt	aatttaa	4197

&lt;210&gt; 361

&lt;211&gt; 2061

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 361

atgggtatta	taaaaagaat	actactttta	caaattgttt	tagttcttgt	gttatgttgt	60
cataggataa	gatgtgaaga	agtaagtagc	atatcgaata	aagcatccgt	taaggatgag	120
gggcaaaata	ataatagtaa	caagagtaat	aataacaata	ataataataa	taataataac	180
aataataata	ataataataa	taataataat	aacaacaaca	ataataataa	taataacaac	240
aataataata	ataataataa	caacaataat	aataataata	ataataacctc	tggttttaagc	300
gtaaaatcag	aaaattttta	tatgatcata	aaacctgaag	gggacgagca	atccccctta	360
aattctttat	ccgttgaaca	aaaaaaagat	actcctcaaa	ttgaagagtt	aagaaaaaag	420
gaagaaacta	aagatcaaaa	agtaaccgaa	caagtaaata	atttacaatc	gaaaaatgag	480
aaattaacaa	atagcttgga	tcaggttgta	caaggagata	ataataacaa	cacgctagat	540
acaacaacaa	gtgaaacgag	tagtagtagt	actactaata	caaacaataa	taataataat	600
aatattaata	ataatagtaa	tagtaataat	aacaatagta	atattaacaa	caataataat	660
attaacaata	ataataataa	tatttatctt	ggtcataata	ataatcttga	tagtaataata	720
attcaacaaa	caaactttat	agaaaaatcg	gaacataatg	ttcaaaaaaca	aaacgagaaa	780
aaagaaaaca	acaatacatc	tggaagcaca	tcaaaaagtt	caagcagtc	gaatttagaa	840
aattcaaaaag	aagtcgaaca	agcagtggtt	aaagaataat	caccaaagga	ggagacatcc	900
aatggacaaa	ataaagataa	ggaaaaaatt	ttatcgaatg	tacaaaatga	tgcaactaat	960
aaaaaaatgg	taaatgataa	tacaaaagggt	ttaagtagtg	ataatatgaa	ctcaagtaat	1020
gatttgaatg	ctcctaataa	gatgaatgag	gatagtaaag	gcagttcaga	atatgtggat	1080
ctggctagcc	aaaagatata	tgatgaaatg	aacaaaaatg	tggaagaaag	tggttcaaat	1140
ttatatattcc	ttaaattatt	atctataggt	tcactatatt	ttatgcagtt	aatattttta	1200
cctacaatat	ttaaaataat	aaagaagaaa	acaacaggag	agttggatgg	ttttccatat	1260
ataatattat	tattatcttc	atttttatgg	ttagtttatg	gaatgttatt	aaataattca	1320
gcgatttgtg	gtcccaattt	agttggattg	atattaggaa	tatttatattg	tgtaatatat	1380
cacaagaatt	gtaaaaacat	gtggctaaag	caaaagttac	attcttatta	taagatatgt	1440
ggattttatat	gttttttatt	atatgcattt	ttatatatat	tatcatatga	acaatatgaa	1500
gtattttgtg	gattttgttc	cttcatatcg	agtatagtta	acttcggtgc	tcctttatct	1560
tatatccaaa	tagtaataaa	gaagaaaaac	tcacttttaa	tacctatgga	agtaacgatg	1620
ggtagtttgt	tatgttcctt	tttatgggta	acatatgggt	ttacgttaaa	ggatggattt	1680
attataatac	ctaatttatg	tggttttatt	ttaagtctct	tacaagtact	attaatcata	1740
ttatatctta	ataaagaaaa	cacaaccttt	aatcatgact	ctgacacaac	cgtagcgaa	1800
atatccacaa	gaaaaaatcg	taataaatat	atccctgata	caaatagtaa	tatgtttttt	1860
aatgaatata	acgtggatga	agaaaaatcg	atgactgaaa	tatcaacaac	tatgcccact	1920
acaatttttg	atttgcctt	tgacgaaaca	tcacccttga	cgggtacctt	caatatagat	1980
tacagccgctc	cgggtgtttc	taatcagaag	tattttaaac	gttcagagag	tttggaagaa	2040
aataactgcaa	taacatttta	a				2061

&lt;210&gt; 362

&lt;211&gt; 2943

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 362

atgaaggagc	taagaaaaga	gttaatttta	aaaaagaaga	actatgaaga	gctacgatta	60
aaactaaatc	atctcgagtg	tgctcgagag	gacagtgtta	aaataaacag	cgagaaagag	120
aagggggaaa	aggtgatata	tgagttgaag	gaaaagttag	ataatgatga	gaagataata	180
aatgatttaa	agaaaaagaa	tagttatcag	gtatataaga	tgaaagatta	tgagaagcga	240
gagaataact	taattaatga	aataaataag	ttgaaacttt	ttattgaaga	aaataagatg	300
acagtgagga	gaggaaatga	gatgaataat	aagaaaattag	aagaaatgaa	gcaaaaaaat	360
aaagagttaa	taaataattt	gaatgatata	agtgatgaat	tgaagaattg	tatagagcag	420
gtaaattctg	ttagtcgaaa	tatggcta	gtcgaaaaaag	aaaaggaaaa	tataataaat	480
gaattacaaa	tattaagaat	gaaaaatgat	acaatgagaa	aaagaataag	taagtttgtt	540
gaacaagaaa	aggtatttaa	atttaaattg	tatacattaa	ataatgacat	attttccaag	600
aatgaaaaat	taaatgat	gcaaaaaaaa	ttaaatgatg	tgaatgaaaa	atataaaaaat	660
attgttgaa	gttttaataa	ttataaaacg	gaacataaag	aacaaataga	aaaaaagatt	720
aaagaataa	atacatttaa	acaaaattat	tattatttaa	aaaaagaata	tgattttaa	780

aataaagaac	tggaaaagaa	tatagaacat	gggaaaaaat	tagaacatga	attatcccat	840
tggttatgaag	aaaatcaaaa	attaaatgaa	gagataaaaa	gacgtaattc	ttttataaaa	900
aataaagata	gaaaaattga	tctcttgaca	aattattgaaa	atgagttatt	aaaaaaaaaa	960
gaaataaata	atattaaatt	aatggagaaag	caaaatgtaa	taaaaaataa	tgaacaatta	1020
ttaaaagata	taaaagacga	aaatgaaaaa	atgaatgaac	atgtaaacia	attacagaat	1080
gaactaataa	aaagggagtt	acaaaacaaa	tgtatatcaa	aagatatcga	attttgtaaa	1140
aaagaaaaag	aagataaaat	caagaattta	gaagatgatt	tattagaaaa	gaaaaaatgt	1200
attgaaaatt	tgaaagatga	attaataaat	ataaaaaaaa	aaatggaaga	taaaatgcac	1260
atgactaacg	aaatggattt	attaagtaac	aaagttgaag	aattaaatag	aattacaaaa	1320
acatatgaaa	agaacatagt	cgaattgaat	aatgaactag	atggtataaa	gaaaaaattg	1380
aatgatgaag	aattctttaa	agaagaggaa	aagaaaaaaa	atattgatat	ggtttataag	1440
ataaaagata	atgaaataca	aattaaagaa	aaagaaaatg	aaattgattc	cttaaaaaaa	1500
aatgaacaaa	atttacatgt	attaaaaaat	gaagaattaa	atgaaaaaga	aatcatattg	1560
aagaataaat	atgataaaga	aataaatatg	ataatcgaa	aatataacaa	aaagatacaa	1620
gaagaaaagg	atatgctaaa	taataaaaata	aaaagtattg	atcagacaca	taaaaatcaa	1680
attgaagaaa	tgcaagaaga	aaataaaaaa	gaacttaaga	gactgaaaaa	tgtatgtgat	1740
atgaatctac	agtcacaaat	tttaataaag	gaaaatgaaa	agcacatgca	agaaaaagtg	1800
gaggaatata	aaaattttatt	aaaacagaaa	gatcaagaac	ttaaaaatat	tatacaagaa	1860
tatgatgaaa	gaatagaaat	tcaaaaataag	gaaatggaag	atatcgtaaa	tgattgtgaa	1920
gaaaagttga	agcaagctaa	aataaataat	aaaaaattaa	ccaccgcaac	gaatatggca	1980
aataataata	atatgctcat	ggatgaaaat	ttaaaagaaa	aagataaaaa	aataaacgat	2040
ttgatgaaag	atatggaaaa	gaaaaagag	gaaataaata	agctcgtgga	agaaaaaagt	2100
aaattggaac	attcacatgt	gaaaattcaa	aatgaaatgt	ctttgttagt	agagcaaaat	2160
gaaaagttga	aggaagaaat	gggcctatca	aggattgcta	taaaagatat	ggaagaaata	2220
aaaaagagata	tggaataata	cgaggaggaa	aagaaaaaaa	atgaggaaga	aaggaaaaaa	2280
aatgaggaag	aaaggaaaaa	aaatgaggaa	gaaaggaaaa	aaaatgaaga	agaaaagaaa	2340
aaaaatgagg	aagaaaggaa	aaaaaatgaa	gaagaaaaga	aaaagttaga	aaaggacaaa	2400
catcaatttg	aagaagaaaa	agaaagaatg	gaaatttatg	aacatcaaaa	agaggatagg	2460
aaaagaaaaag	acaaaaagaa	gaaaggacat	tcaagtgata	aagaagaaaa	atataataag	2520
aaagaaaaaga	caaaagaaaa	atcatcaaat	atattatttg	atgaagagta	tataatacaa	2580
ttagaagaat	tacgtgacac	aggagaaaat	tgttttatat	atttaaaatc	actaagtaaa	2640
gagttggatg	ttattataaa	caagctgaaa	tcaaaggatg	atgccttatt	aaatgatgct	2700
tttaataaaa	taaacttggt	tataacatct	tggaaatatat	ttaatgagga	aaacaaagaa	2760
ggagataata	taacaacagt	ggaaaaatata	gcaacggagg	gaaatataac	aatagatgag	2820
aatacgacag	aggtagaaat	gaataatgaa	gaagtataata	aaatttttag	tgttgaaaag	2880
tatgatatgc	tcaaaaaaga	ggttggtgaa	aaggttgaat	gtatacaaaa	attaattggt	2940
taa						2943

&lt;210&gt; 363

&lt;211&gt; 3369

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 363

atgatcaaca	aaatattgaa	cgggtggcgt	atatacgttcc	ttttgaactt	ggttatttttc	60
cttgatcaac	aactagggtt	gtactacatc	ctttttgaaat	ataacaaatt	gatattgtta	120
ctatgtttat	ttgatataata	tattttttatt	catttttttct	ttaataactc	tcaatcattt	180
agtgtgtga	aagggggtaa	atgttgggtg	ttatatgtat	attctatttc	aataaaaagta	240
atattttatg	atttttttgc	atttaattgat	aattttttttt	tagcagatat	gacaaaggat	300
tattataata	agtgtgtgat	atttctgttg	ttaaatttga	gtaccctaata	atatacagcc	360
ttatctgtaa	aatcatataa	acaatttatat	gaagatgata	taacaatatc	taatgagaaa	420
ttatttcata	atgattttaat	attacatgta	gttatagatt	tgtttgatat	gtttgaaact	480
ttattcacat	tagtaaaaaat	gtccttatatt	ataaaaaata	caaattttttg	gataaaaaat	540
atgggaggag	tcttaatttc	attctctctt	tatttgaatg	cttatttcatt	tcctatcata	600
tctattgtac	cagaaaaaaa	taataaaaaat	ctagatttag	gagatatcta	cttttgtaaa	660
aaacatgctg	ccatgattgg	tatttatatta	gtagatattc	cttttatgat	tctacgattt	720
tattttctag	cattcttctt	ttcaaatatt	cactttcaac	ccctcctaata	taaaaatatt	780
tgttttatatac	ccatcaaatg	taaagctata	aaaaattgta	attttatatt	tgaacagcta	840
aaaaaaaaata	tacaccattc	aaataaacac	acaaaaata	aatatatcaa	ctcccaacaa	900
acctgcactt	atgactctta	tttgaaaaat	ggacgacaaa	aaaaaaaatc	ctccttaata	960
tataataacta	ataattttgt	ttctctcacc	gtggctttca	gaaattcggt	ggacatacga	1020
tccattgcgt	ccataagaaa	tgaataaat	aacaataggg	cattaaaaaa	taaaacgggg	1080
gaaaaacaaa	tgggcaaaat	gggcaaaatg	ggcaaaaatg	gcaaaatggg	caaaatgggc	1140
aaaatgggca	aaatgggcaa	aatgggcaaa	atgggcaaaa	tgggcaaaat	gggcaaaatg	1200
ggcaaaatgg	acaaaatggg	caaaatggac	aaaatgggca	aatgggacaa	aatgggcaaa	1260
atggacaaaa	tgggggacag	ccaaatgggg	aaaatgggag	gaaaccaaat	ggggaaaaatg	1320
ggggataatc	atacctgtga	taatcatatc	agtgatagtc	atacctgtga	tagtcatacc	1380
tgtgatagtc	atacctgtga	taatcatatc	agtgataata	atacatgtaa	caatcatacc	1440
agtgataata	atacatgtaa	caatcatatc	tgtgataatc	atacctgtga	taatcatatc	1500



agtgataata	atacatgtaa	caatcatacc	tgtaataatc	atacctgtaa	taatcatacc	1560
tgtaataatc	atacctgtaa	taatcatacc	tgtaataatc	atacctgtaa	taatcatacc	1620
agtgataata	atacatgtaa	caatcatacc	tgtagataata	atacatgtaa	caatcacacc	1680
ttgggtaatc	cccattttta	taacccccc	ttttacaata	acaccttgga	tatgccaaat	1740
aataagaaaag	aaacccacaa	caacttttagt	cataacgaca	cgcaggagaa	caatattatg	1800
aagaacaaaag	atgggtctata	cctaaacacc	aaaagttatg	ataacaattt	atttgggtgca	1860
tctaataaagc	tcacgagtc	ccatgaaaat	ataaaaaaga	taatagaatt	gaatacaaca	1920
aaacttgctg	aagaacgaaa	taatttcatta	ctagatataa	acgaatataa	taacaatagt	1980
aatgatttga	atgaatat	tgataattta	atagaaaata	atatattgtc	ctatagaaaa	2040
atgaatataa	aaaaaaataa	aataggaacc	aaattttatta	tgaataaatt	aatgtatact	2100
aatgtatcga	ataatgaaaag	atatagatat	tatttttagatg	ataattttaa	agtttcttat	2160
attaatcagt	tgagattaat	gataccatat	attacatat	gttttaggaaa	aatagctatg	2220
tctattgttt	tttatatttt	ttatataaaa	tttgacataa	gttattttaa	attaattttta	2280
acagattata	aaatgtattt	taaattattt	gaacataaga	atattatatt	tattgtttct	2340
ttttctataa	tattagggaaa	tacaattata	tcattctttt	cattcatttt	ttgtcttcc	2400
ttttttgaag	tagtattatc	aacttttatt	atatttataa	aatgtatttc	agagttctta	2460
ttccttttat	tattagtata	taatgaagtt	tttgaaatct	ttcttagaaa	tattaaacaa	2520
ccggataaat	atgctccata	cttcttttta	acatttgctg	ttatcccatc	atttaaaatt	2580
attagaaaata	tatacttttt	tctgtgtgcc	ttatcaggaa	ggcaatttat	agcatatatt	2640
atcagaccat	ttattaaaga	taaaaacata	agtaaattac	ccaacttttt	taatataaaa	2700
gaatataata	ataataataa	taataataat	aataataatg	ctcataataa	taagtctcat	2760
aataataaca	atgctcataa	taataatatt	tcgcacaaca	tgaactacat	aaatgaagat	2820
tattattttat	ttaataataa	tgacatgtat	acaaaaataa	ctgtcaaagg	agattataaa	2880
ggattcatat	ctattgcttc	cttactaata	tatatataa	caaaatatat	gcatggatta	2940
gcttctttat	caacattaat	gctaggaaat	aatttttatta	aaaatttaag	acttaattat	3000
aatttaagaa	ataatcatat	attacttata	tttattaact	tctttacaag	attatcatta	3060
ttattatttta	tttatgtaca	ttacaaaact	agtgataaat	tatatgaata	tgtagaatat	3120
ttctattatt	tagtcacttt	tatattttata	gtagatttta	tttttaaatg	gatctatatg	3180
ttcatatcac	ataatctaag	attgtgtgcc	gcatatcacc	tagaatttaa	atctatgtat	3240
gaagacattt	attatcatag	ccaaatcaaa	aaggaaatcat	caaaaatata	tttaaaacaa	3300
ctatatacaa	aatatcaaac	caacaatttt	tattactaca	acattcctct	cttttcagaa	3360
tttatatga						3369

&lt;210&gt; 364

&lt;211&gt; 1650

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 364

atggaagaaa	aaaaaaaaat	aaacaacaag	tcaaacagtc	gagtttctaa	tgatgatagc	60
aataaagaga	aaagaaaaaa	gttaaaacct	atacaagtc	gaagaagcat	taaagatata	120
ataatttcac	ataatccata	tgattatata	tataattata	aaggaaatga	tatcgatata	180
ttcgatatta	ataaacatga	taagattgta	aaagatagaa	cgagtggagat	agaagaaaaat	240
tcaaatatat	ttatagaaaa	tgaaatatta	gataataatg	aaatgttggt	gagaaaaagaa	300
ttaaacgaat	taataaataa	agatgattta	agcgaagaca	tgaaaaatga	tattaaagct	360
ctttatattg	aagtacaaga	aatgtattta	atattaaaaa	atgatataaa	aaataatatt	420
ccgtcatctg	atgaaataat	aaaattatat	ctggcagatg	atcaaaaaga	taaaagtagc	480
aatattatat	ggaaaagatt	ttgtttttat	aaattattga	gtgataaatt	aaatgactta	540
catatatcta	ccatatcttc	atatagacat	acatatttaa	aaacgatata	tatatgggtac	600
aaaaaaaaata	agaagttggt	atttaatacg	gatgataaca	aagaagtgtt	tgggggggaac	660
aatattgtag	gtgaaataaa	tgaggtagac	gaaaaaaatg	agagtgtatga	aaaaaatgag	720
gtagatgaaa	aaaatgaggg	tgggcgaaaaa	aatgtagacg	aaaaaaatga	gggtggcgaa	780
aaaaatgtag	acgaaaaaaa	tgaggggtgat	gaaaaaaata	taacaaacca	gaatgaaata	840
attaaaaata	aggacccttt	gaattgtcat	acaaaaaagg	aagaaacaga	aaaagaaatg	900
aaaaaggatt	atgcgaaaaaa	aatatcacac	aattttgatg	aaacattaca	agaagaaatg	960
aataaaaatta	aaaaagaaca	tgagataaaa	gaaaacgaca	taaacttggt	agtatataat	1020
gaagaacctc	atgatgtggt	aaataagtac	acatttccaa	atgatgtatt	cctattaaat	1080
aatacaaaaa	ttagtgtataa	aaatataaaa	aacgtgaaag	aagaacaaaa	tgttgttaagt	1140
aatgatttaa	atgtattatt	attaagaaat	gataaagatg	aagaagataa	gtatgctaaa	1200
ggtattttgtg	aacatgtatc	cttagacata	tttataaata	ataatgatgc	gtttaacata	1260
aacaccaatg	atgctgttaa	tataaacacc	aatgatacgt	ttaatataaa	caccaatgat	1320
gcgttttaaca	taaacaccaa	tgatgcgttt	aacataaaca	ccaatgatgc	gtttaacata	1380
aacaccaatg	atacgtttta	tataaacacc	aatgatacgt	ttaatataaa	gaccaacgat	1440
acgcttagta	taaataatta	taatttagac	ataaaagaag	agcataaaaa	tgtaaccata	1500
cctttacata	caaacaaaat	aaaagaacta	gaagaagaaa	taaaaaaaca	aaaattgtta	1560
atcaaaaaaa	aagaaataga	aattattaat	tctcctatag	gtattaaatt	taaagatatt	1620
tttgaaaaat	ttcaagatat	aaacaattaa				1650

<210> 365  
 <211> 579  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 365  
 atgttactag gaaggagata catcacacat aagtacaaga tccacataaa aaaaaaaaaa 60  
 aaagagaatg ataaaaaaaa taatattact aatgtaaatt acaaaacaaa caatgtatca 120  
 gaatctatat ctgttatttc atcattaatc ataaaattaa ttaaatatat gaattctccc 180  
 atatcactaa ataaaataat tataggaaat aattttatta aaaacacaag attagataac 240  
 ttcctttttt tttctcatat taaagaaata acattttaat taattttata ttttatttct 300  
 ctattaatat ctttaagata taaatatata aattctttat ttatattaac tctcttcttt 360  
 attaatatta tattatctac cctttattta attttttcaa aaataaatag aaatgtcgcc 420  
 atggaataca tacttgcaca ggcaatatat gcccatagaa atgaggatca tcataaagga 480  
 atagaccttt tggattttga aaaaaaaaaa aaaaaagcat atcagaaata ttcatatgat 540  
 tatatgatac tttttggaaa tacgctaaat tattattaa 579

<210> 366  
 <211> 924  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 366  
 atgataaaaa atgtctgctt cataattata cacggagcaa ggatttatag aaaatgcaaa 60  
 tatcacaatc ataaaaaaaa aaacaaaaaa aaaaagaatc cgaaggaaaa aagggataga 120  
 cataaaatta tcacaaatat aaacgataat gtaaacataa acggatttca agatgtacct 180  
 ttatattcaa ataaagatat ggaaattcaa agtaataagc aaaaatattg gagcagaaat 240  
 atggacaaaa tggatattca ttctactaac accaaaatat tttttgataa gaacataaat 300  
 tttgataaaa attttttttg taactatact agccgattta gcgatattat aataaatata 360  
 gatgatatag attatattaa ttacaaaaga ataaaacatt tgaattatga aaaaataaaa 420  
 aggtccttat atttttttta tttaaaatat aatggaataa gcataaaaaa atatatatct 480  
 tgttatatag ataattattga gaaatattcc ataagatatt tttttattat ttttttcttt 540  
 tttattttta tagctataaa aattactatt ttggtaatta cttatacatt tcattttgat 600  
 gaattattta ataaatgttt atatgaattt acatataatc ataattataa tattataaaa 660  
 tcatgtgtaa tacttaaaat taattttatt attattttat catatacatt atcttcattt 720  
 ttcttatata ttttttcttc atcttttttt gatgctctat ttatgcctct ttttctattt 780  
 ttcaatatat tctcttatat attcgtatta attaccatgt cgcaatataa tccctcctat 840  
 gattacctga attactttta cagaagtaag aatattgtga tagttttatt ggtctttata 900  
 tattttggtaa aaataaaaaa ataa 924

<210> 367  
 <211> 999  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 367  
 atgattgtta ctatatgtat tcttataacc atttttagttt acattctttt attttatata 60  
 aatgattttt atatttttaa tatacataaa attagcatag aacatatatt attcttttta 120  
 attattactc atgtttctat tgattttata gacatatctc aattttttta ttcttcttat 180  
 tcttattttt ttttatatta tttccgtcta aaagatgaaa tcaatatatt taaagacaca 240  
 catatttttt cagacaaaaa tctggataaa aacaaaatag tacattttta caattttaact 300  
 ataaatatat atgaagtatt attttattacc ttcggaattt taatagctct aaacatatcg 360  
 ctgcacgcat attctttccc aaattattct tatgaggaaa tcccttcaat attaaaaatt 420  
 aaaaataaaa ataataataa tagtaataat ataaatagta ataataataa tagtaataat 480  
 ataaatagta ataataataa tagtaataat atacattgta ataataatat acattgtaat 540  
 aatatacatt gtaataataa tatatgtagt aaattcataa aacataaacc atcattacat 600  
 aataataatc ctaacaacaa agaagaagac atatacaaaa tttactccaa taaatataat 660  
 acacacaatg atcaagatac atataatacc tataatcata ttaaaacatc caatatgatt 720  
 aatataaaaac aatacaaaaa tgattcctcg gcttataata attcatataa atatattaat 780  
 tctccttatt attataacaa taactcatct aataataata catctaacaa tataactatt 840  
 aataaacaac aggagttttc caaagttgca ggagatgcta tgtcatgttt aaaatatata 900  
 agcatatata gttttctttt aacagatata tctttctttt tatctcgact cctactattt 960  
 tttatgctac aaacggtttc atgtaatgta aaaaaataa 999

<210> 368  
 <211> 1656  
 <212> DNA



&lt;213&gt; Plasmodium falciparum

<400> 368  
 atgaaggcta gcggtattatg ccaacaattg aataagtgc tgtggaatca acttgtcgtg 60  
 tcgaggaagt gtataaagaa gtttgtttgt aattattcaa caaagattag tccaatagag 120  
 atatcaaaaa tattagaaaa gaaatttgaa tcttttaatt tcaaacgctc gtctaacgaa 180  
 gttggttatg tgttgagtgt tgggtgatgt atatgtcgtg cttatggatt gaacaatgta 240  
 aaatcttctg agttggtaga gatacataat gaggatgata aagggagtgt tacgtatgga 300  
 atggctacga atttagaata tgataatgtt ggaattgtaa tatttgaaa tgatagaaa 360  
 ataaaagaag gagatgtaat aaagcgtaca aatcgtatta tagatgttaa tgttggatat 420  
 gaattattag gtagggtagt tgatgcatta ggtaattgta tagatggaga gaagaatgta 480  
 gttactaagg agagaaggaa aatagaaatc aaagcaccag gtattatagc tagaaaaagt 540  
 gtgaatgaat ctattattac tgggtataaaa tgtatcgata gtttagtacc tataggaaaga 600  
 ggtcagcgtg aattaattat tggagatcga caaactggga aaacagcgat agctatagat 660  
 gctattattc atcagaagaa tattaacgat aatgttctta ataacaatga aaaggtttat 720  
 tgtatatatg ttgctattgg acagaaaaaa agtaattatg cttaaattag taatttatta 780  
 aaaaaatatg atgcttttaa atatacaatt attgtaaaatt cgagtgcctc tgatgcttct 840  
 cctttacaat ttcttgacc ttatacaggc tgtgcaatgg ctgaattttt tcgagacaat 900  
 ggaaaaacag catataattt ttttgatgat ttaagtaagc aagctgttgc ttatcgacag 960  
 ctgtctttat tattaagaag acccccgga agagaagcat atcctggtga ttttttttat 1020  
 atacattcca agttattaga aagatcatct aagttgaatg ataattttaa aggagggagt 1080  
 ttaacagctt tacctattat cgagacatta aataatgat tctcagcata taccctact 1140  
 aatgtttat ctattacgga tgggcaaaa tttttagaaa gtgaattatt ttataaggga 1200  
 attatactg cgattaatgt aggtctcagt gtttcaagaa ttggtagtag tgctcaatat 1260  
 aattgtatga aaaaattagc atcatccatg aaacttgaat tagctcaatt cagagaaatc 1320  
 gttgccttct cacaatttgg atcagatttg gatgtatcta caaaaaaatt aattgagaaa 1380  
 ggtaaaattt taacagaaat attaaaaaaa aaacaatatt ctctgttaa tataagctat 1440  
 cagatatgtt taatttatgc agccacaaaa gattatcttc ttaatcttcc tatagaaaaa 1500  
 gtacaagatt ttgaaacaaa atattttgat tacttagata acaattatct tgatgtctta 1560  
 aaaaaaattc aatccaactg tcacttatcc gaagtagagg atcagataaa ggaaagtata 1620  
 caaagtttt tagagcttta taaaaatgaa gcatga 1656

&lt;210&gt; 369

&lt;211&gt; 5454

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

<400> 369  
 atgtcatcct tattacgaag ttttaaaaac ctccctcgtg tgaaattaaa aataaagaga 60  
 aatgaagaat atgaaagaaa tttaataat ttagcaaac tatcaaatca taaaaagtta 120  
 ataagaatag atataaacgg aaaggtcaag aaatgtagtc gctatttttt taataaaaaat 180  
 aaatatattt atataaataa tatagaggat atgaaaagat ttgatgaaac taaaaatata 240  
 aatataaata aaaaataaaa taaaaaaaat aatataaatg aaaaaaataa tataaatgtt 300  
 aaatatgaca tatataatat tcacaataat accttttgata ttcataggaa ctatcaatgt 360  
 aaaaaaggaa atataaaaaa cgataatata ttacatattg acaaaaaaga aaaaaaaa 420  
 gaagaacatc agagttttaa aaaaaaaga aaagaagaac aaaaatataa caattttata 480  
 agtacatata atttaacaca agacgaaatt atatatatga gatttattca taaaattaaa 540  
 ataaaaaata tgtttgcact tataaataat ataagaaaaa atatatatat taataaatat 600  
 caagcaaatg taatattaaa ctgtatttat aaatatttaa gaatccattg ttatacttta 660  
 tcaaaaggag agttcttttt ttttgtttat atatttccac agcatgtaaa atattcatcc 720  
 aaggttttgt cttacctcat taacttatta caagataggc acagaataag ggactctaca 780  
 caaatgaatg tatgttataa tgaaatgaag aaggacaacg acgatgataa aaataaacat 840  
 aaagataata ataataataa taataataat aaaaataaac ataaagacaa taataaaaaat 900  
 aaacataaag ataataataa taataataat aaaaataaac atagtgatca cctcataagt 960  
 aacctttatg ataaccatca aaataaacat agtgatcacc tcataagtaa ccttcatgat 1020  
 gaggaagata attatttttg cacaaatttg acgatgagcc agtgcacaa tctcatatgt 1080  
 gaaattaatt tatattatct aaatatttct ataaaaaagt tatactttga ttatctaaat 1140  
 aaatatatga aacacataaa acttgaacac atcttcgaat tattttacaga aggatgttat 1200  
 ctcttcttat taccaaatga aaaaatcaaa tctaataata aacgacttcg taattcatat caacatatct 1260  
 cttaaaaaat tgaaaaatta tattacaagt tatcattgtt caaacaatat ttatgtacat 1380  
 acgttgaata gatataataa atttttatca cataaaaaaa tattcataaa taattatgac 1440  
 atccttttta acgatttata tattacttta gatcatatct tatatttaac taataaaaaat 1500  
 atgctcatca aacattataa agcacagct ttgaacaatt attattcttt gtataacaaa 1560  
 gaaaacctga attatctgaa caccatactt gaaaatctaa aagtaaaaaat atttccatca 1620  
 aaagaaaaaca acgaaaaaag acaaagtttg aaaaatgtaa acgatccaaa ccaacaacat 1680  
 catctaaatt ataagcaaca tactacaac gtatgataat acatatgaac aaatgaaaaa taataaaaaat 1740  
 aaacatgaca aggatgattc tataacaaca catatcttac aaaataatta tgaacaaaaat 1800  
 aaaatatatc ctaatgaata tataacaaca aatattaata acatatttga tctacacaaa 1860  
 +-atattctt ttcaaaaaaa agacgacaca

agagaacaga	tttatgaata	tgaaaaagaa	aatgaaagtt	ctgatatttt	tagggattct	1920
tataaaagga	aaatcaagga	agaaaaaaag	aaaaaaaata	tatataaata	tgaagaccac	1980
ccattaaata	aagaaaaaaa	aaaaaaaaaa	aaatTTTTTT	atattaatta	tgaaaaaggg	2040
gatgacaaaa	atgataatga	tttatattat	aataatatat	attctaagaa	cctagaaaat	2100
atccaaaata	aaaattataa	caataataat	aataacaata	ataataataa	caataataat	2160
aataacaata	ataataataa	caataataat	aataacaata	ataataataa	caataataat	2220
aataacaata	ataataataa	caataataat	aataatTTTg	ataaatataa	tataccttgt	2280
acaaacacaa	atctttcctt	actctatgat	aaagaaaaat	tatttccttt	tacatatgca	2340
tatgataaaa	ttcaaacata	tacctatgaa	gaattaaaa	caaaatataa	aatatcaacc	2400
aaaaattgtag	atagaaatat	taaaatgttt	ctaaaaatTTT	taaaaaatta	taataataat	2460
gaaaaatactt	atgtagataa	tattatttct	aaaaaaaaca	ttttccattt	gttagctagt	2520
atgaaaaata	aggtaacaaa	caagacaaac	actcacaag	atatatacca	atztatccat	2580
tcatggtatc	atattaaact	tgcggtatcaa	aataaagaac	attcctttca	agatgacaaa	2640
tatttaatta	ataatttgta	tgaaaagcat	aaagtacaac	ataacaccat	gacacatcat	2700
attattaaaa	tggaggataa	aaaaggagat	atacatTTTaa	tggaaaataa	taatatgTTa	2760
ttaaataata	atatgtcgtt	aaataataat	atgtcattaa	ataatagtat	accattaaat	2820
aatagtatac	cattaaataa	tagtatacca	ttaaataata	gtataccatt	aaataatagt	2880
ataccattaa	ataatagtat	accattaaat	aatagtatat	cattaaatag	ttgtatatca	2940
ttatataata	gtatatcctt	atattcaaat	aaaaatactt	catttaacca	cctatataat	3000
aatatatatg	acacatgttt	cattcaaaaat	aactatatat	caaatcaaca	agtacaaaat	3060
tataagaatg	aaaaaaatac	aaatatggag	cattataatg	aaaagaagct	ttttattttt	3120
cctatttact	atttagaaga	caagaactat	tttttaaagt	tggtaaataa	tatatctttt	3180
aataagaatt	ataataatc	atttttttat	acatgtcaaa	ttaatatttt	atcaaaaggt	3240
ttatattatt	ttataaatta	ttatacattg	ttaatatcta	gtaattataa	agctgaagaa	3300
ataaagacgg	acgacaacaa	atgtaacatc	aacaataata	ataataataa	caacaataat	3360
aataacaaca	ataataataa	caacaataat	aataacaata	ataattataa	caataataat	3420
tataataata	ataatgtgta	tccttttaata	aatcatttta	caactacctt	ttatgaaatg	3480
gtcacatatt	tattaaaaaa	tatataccgt	atacacatat	ccaaattttt	ctacatatTT	3540
gttgccctgt	ccaaattttt	tcttatgaac	tcttatcaac	aaagcaatac	gaacaaaaga	3600
gagaattccta	tacatatgga	aaatgtatta	tatatTTTat	atataataag	aaaaaaacaa	3660
tatgagcatg	ttaaaagtat	attgtatgat	aaaagtaacg	agaattattt	taggtTTTaa	3720
gaaaaataagg	atatcaaaat	ggagaataca	aatatgttat	ataatataat	attgaacaac	3780
ttttctacag	aagatcatga	tgaattcatg	acgtttcaaa	aaaacaatga	agataataat	3840
aaaatgataa	tagacaatat	aaataatgtg	gataataata	acgattttaat	caagtcacac	3900
cattgtgata	ataataaaaa	agaagatact	tcttctttac	ataataaatt	gtataatggg	3960
ttacatttcc	taattatgtt	cttaaaatac	tatttagata	atacaaaaca	ttttaaaata	4020
aaccactttt	taagttcctt	attttatata	aataaaataa	taccgcctaa	tatgaaacac	4080
atgtatcatc	ttgaaacata	tttacataaaa	aatcacaaga	tttataagaa	taaatttttt	4140
tatatatata	atggttttga	tttactaaaa	aaatcatatt	tagtacatat	aaaaaaatta	4200
tatataaatt	catatataaa	atcatataat	aataaaaaaga	agaacaataa	tgTTaatgga	4260
gatgtttata	ataattttat	gtataaaatat	aatattttatg	acaatattga	ttatatTTTT	4320
ataaaaaaaa	aaaattttat	ttgttataca	aatcattttg	ctttattata	ttttacatac	4380
atatatagct	tgaacaaatt	ttattattgt	acattatatt	ataatatatc	aaaatgtttt	4440
tattacaaaa	taaatataga	aaatatacat	tttaaaaaata	aaattatttt	gtttttttata	4500
tttacacaat	gtaaatatat	atatataaaa	tttttcagat	tattagtaca	aagcattttc	4560
tcacttctg	aatttcaaaa	agtaggaaaa	ttaatgtctat	acatatattc	aaacataata	4620
ttactcttag	ttaaaaatag	taggatgaag	ctaaatatata	aaaaaaaaaa	aataataaaa	4680
aatatatcca	agcatattta	ttcaaaataat	gaatttataa	ataataataa	aataaaaaaa	4740
atacatacaa	ataataattc	catgtcaaaag	aattttattta	tttgaacaa	attattgaac	4800
atccaatgga	attatatctt	cccatggat	ttattttatct	catcaaattt	gtcacatgaa	4860
acggaattaa	taataaaacaa	acttgaacaa	aatatttttaa	acaacaacaa	taataataat	4920
aacaacaata	ataataataa	taataacaag	cacaataata	ataatataag	gggaaaaaaa	4980
aattatgatt	atcaaaaat	agaaaaattg	ttctactcaa	aagaaacaca	tatgataaaat	5040
aaaatgaata	tattaaaaat	aaaagatata	aaaaatgcac	aaaatgatga	atgttcacaa	5100
aatataaaat	atataaaaaa	ctccattatt	aatttaaaca	actttaaaaa	tgaactattt	5160
acacatatcc	cattcttaat	caagcagtat	aaacaatata	ttatcgTaca	tgaaaaaaat	5220
aagtgtatca	ataataaagt	acaaaatttc	aaccaaaaaga	atcatctcat	ttctcagaca	5280
tttaataaga	ttgatgaatc	ttctttttatt	tatttttgatg	atgatataga	acatgaaatt	5340
tttactcttt	gtcaaaaactt	tttatcgtat	gattatgtta	ccaccaattt	ttgcatatca	5400
aagaaatcgc	tatattatga	tttattgatg	tatttaaagg	gtacaaattt	ttag	5454

&lt;210&gt; 370

&lt;211&gt; 426

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 370

atgttgaatt	tttatattgct	acaaaataga	caaggaaaaa	cccggttttc	caaattggat	60
ataaactgca	acgaaaaaaa	acaaaaaaa	atagaaaagag	acataaataa	aatattaata	120

aacagaagta	gatcatatgc	aaatattttc	gtttatgaaa	attttaagat	agtatatagg	180
ttatatgcag	gacttttattt	tgtgggtatgt	atagaaaacg	agaatgaatt	atacatcctt	240
gagttcattc	atttttatggc	tcaactttta	gatacctttt	ttacaaatgt	ttgtgaatta	300
gatttgcttt	ttaattttca	ttttttatat	tatttttttg	ataatataat	attgggtgga	360
tatatatatg	aaattaatag	aaacattata	ttagataaaa	taaataaaat	aaaaaagtta	420
atatga						426

&lt;210&gt; 371

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 371

atgggataatg	aatataaaaa	attttatagaa	ataagaaaga	gagagaataa	aataggtgac	60
tttaaaataa	caaacattga	catcaatacg	tttaagaaat	ataaacataa	aaacaatcca	120
actttttcaa	cagaatttaa	aatattttata	acaggtataa	taattagtat	gtgggtgtgtt	180
tttgctatttt	atttaactat	aagaattatg	tcacctgata	acttttgattg	ggttgaggat	240
gaaagaaaaa	gattagaaga	tgccaagaaa	aaaattattt	taataaaaaga	aaaaaatatg	300
gaaaaaagta	tagcagaatg	a				321

&lt;210&gt; 372

&lt;211&gt; 1575

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 372

atgggggtgtt	cacaaagttc	aaacgtgaaa	gatttttaaaa	cgaggagaag	taaatttacg	60
aatggaaaata	attatgggaa	aagtggtaat	aataaaaatt	cggaggacct	agcgataaac	120
ccagggtatgt	atgttagaaa	aaaagaaggg	aagatagggg	agtcctattt	caaagttcgc	180
aaattaggta	gcgggtgcgta	cggagaagta	ttattgtgta	gagaaaaaca	tgacatgggt	240
gagaaggcta	ttaaggttat	aaagaagtcc	caatttgata	agatgaaata	ttcgataaca	300
aataagatcg	aatgtgatga	taaaatacat	gaagaaatat	ataatgagat	atcattatta	360
aaatcattag	atcatcctaa	tataataaaa	ttgtttgatg	tttttgaaga	taagaaatat	420
ttttatttag	taaccgaatt	ttatgaaggt	ggggaattat	ttgaacaaat	tattaatcgt	480
cataaatttg	atgaatgtga	tgctgcta	ataatgaaac	aaatattaag	tgccatattg	540
tattttacata	aacataatat	tgtacatcga	gatattaaac	cagaaaaat	tttattagaa	600
aataaacata	gtttattaaa	tataaaaatt	gtcgattttg	gtttatcttc	ctttttctca	660
aaagataata	agttaagaga	tagattaggt	acagcatatt	atattgcacc	tgaagttttg	720
aggaaaaaat	ataatgaaaa	atgtgatgtc	tggtcatgtg	gagttattct	atatatctta	780
ttatgtgggt	atcctccttt	cgggggtcag	aatgatcaag	atattataaa	aaaggtggag	840
aaaggaaaaat	attactttga	ttttaatgac	tggaaaaaata	taagtgaaga	ggcaaaagaa	900
ttaatcaaac	ttatgttgac	atatgattat	aataaaaagaa	taacagcaaa	ggaagctcta	960
aatagtaaat	ggataaaaaa	atatgcaaac	aatattaata	aaagtgatca	aaaaacttta	1020
tgtggcgctt	tatcaaatat	gaggaaattt	gagggcagtc	agaaattagc	tcaagcagcc	1080
atattatttta	ttggaagtaa	attaacaaca	ttagaggaaac	gtaaagagct	tactgacatt	1140
tttaaaaatg	tggaataaaa	tggcgatggc	cagcttgata	agaaggaatt	gattgagggga	1200
tacaacatac	ttaggagctt	taagaatgag	ttaggagaac	ttaaaaatgt	cgaggaagaa	1260
gtagacaata	tattgaagga	ggttgatttt	gataaaaaatg	gatacataga	atattcagag	1320
tttattttctg	tatgtatgga	taagcaaatac	cttttcagtg	aggagagatt	aagagatgca	1380
ttcaattttgt	ttgatactga	taaaagtggga	aaaataacga	aggaagaatt	agcaaatatta	1440
tttggtttga	catccataag	tgaacaaatg	tggaatgaag	ttctcggaga	agcagataaa	1500
aataaagata	acatgattga	ctttgatgaa	ttcgtaaaca	tgatgcacaa	aatttgtgat	1560
aataaatctt	cataa					1575

&lt;210&gt; 373

&lt;211&gt; 822

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 373

atgttttatag	atcaaggata	tgaaaaattc	gtaacccaaa	ttaacaacga	attagttcat	60
gaaatggaca	gatcatatga	atatataaac	ttaagttatg	ataaagagca	agaaaaggaa	120
tatgtaaata	attattttaaa	taatttatatt	gatccagaaa	aaaataatga	aatctatttt	180
agtacaaata	gtgatactat	ttcagaagta	gatgaaacca	attatcatga	aaaggtaaat	240
aataaatcga	tagaacaata	caaaaaattt	gaaaaagatg	aatccttaat	aaatcatcaa	300
tccatagaaa	acaaaagaaa	cacacaaaat	gaattagatg	ataatgaaca	aaatatatta	360
aacaatattt	taaaaaataa	caatcatttt	ttcaaggaaa	aaaatatata	taattctcaa	420

aatgaatcgt	atgcagactc	cccaagttgc	tcacaatata	tgtcacaaaa	tatgtcacaa	480
aatttatcac	aaaatatgtc	gcaaaattta	tcacaaaata	tgtcacaaaa	tttatcacc	540
atztatcaga	acctagtgtg	atacaaatat	gcattccagca	ccaccgatat	atatattaaa	600
gaaaaaaatt	atttttccaa	aaaaaaaaaa	attaaagtaa	aaaaggaaaa	taaaatgaaa	660
ctcttttagaa	atataaataa	aaatgatatt	tataatttgt	ttcacgaaga	aatatgtaga	720
ttatgtaaaa	ataaaaaata	tcacatttct	aagacaaaag	ctgatgacct	tttcttttat	780
aaatctgtaa	ataagttata	tcactcgggt	aatatttcgt	ga		822

&lt;210&gt; 374

&lt;211&gt; 3582

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 374

atgtacctca	tcatgaaacg	tatgctcatt	gacgagtgcg	aaataaagat	tattaaaaag	60
aaaaagacgt	atttaatat	acccatattt	atcgacatta	taaaaatttt	ggatgtatat	120
gatgagataa	taaaaaagac	aaacatcgag	cccttgatca	aattatatga	ggaattaaaa	180
ttattttttac	tttatttttt	ccataaatta	ttatataatt	tattaactga	acaagataat	240
ttacctcgaa	atattttcaa	atattttaca	ataaacaata	atataatata	taataagaaa	300
aaaaaatata	acaatttggt	atcgataaac	tctaaaaaaa	aagattcgag	tgaatttttt	360
aatagttatt	atagataatac	aaattcgata	aatgaaaacg	ttgtgttctt	atcatttttt	420
gaaaactttt	atttctttta	tacattttacg	aataatggac	aagcttccag	ttctttttcc	480
tccttatcct	tttcttttaa	ttcgataggt	tcattctattg	aatcggtatga	aggggatatg	540
tataaggata	ctaattgtgt	acatgacaaa	atggaagtat	ataatcataa	taataataat	600
aataataatt	atataatga	caaaagtggg	aaagcatttt	ctcagaaaaa	tgaatatgaa	660
gatataataa	taacaaaaga	tcacacagcc	ctcaacaatc	atgaatatga	tcattctttcc	720
tcaaaacatg	atgataacta	taatgataat	aataataata	ataataattg	taataataat	780
tgtaataatt	attataataa	tgcgagtttg	atgaaaaatg	agaaatcttc	tcagataata	840
aaaatgtata	aaaacaaaat	cgacatacta	aatatgcaat	ataatcattt	ttttgtgcac	900
aggtgtaaaa	atgaggggaa	gtgcattttta	ttgatcaaaa	gttattttta	cgattattttg	960
tgtgctctag	taaatagttt	gtatatatat	tcgaaagata	tatatcttat	caagaattttt	1020
aattcgaagg	gcgaagggaa	aaataaatgg	aaagacaaaa	atgaaaatga	tcaaaatggt	1080
gataatatta	ttaatgatga	taattattatt	aatgatgata	atattattaa	tgatgataat	1140
attattaatg	atgataatgt	tattaatgat	gataatgtta	ttaatgggtga	taattattatt	1200
aatgatgata	atgtttattta	tgatgataat	attattaatg	ataataatat	tattaatgat	1260
aataatatta	ttaatgatga	taattattatt	aatgataata	atattattta	tgataataat	1320
attattttatg	atgatattcct	taataataag	aacctatcaa	aatacaaaat	gaaagatgtt	1380
agaggaaaaac	aaaattttctg	taatagcgaa	acacatgtta	tatatcaaaa	tagcaaaagt	1440
tctcaaaaata	aagaatcgaa	gtactcaact	attatgaatc	ataagaaaga	tgatacatat	1500
tcattttaaga	cacataagag	gaatgatgtt	catttttaata	ttatccataa	acagaagata	1560
gaagaacatc	atgggaataa	agaaaaaaa	gaaagaaaaa	ttattaaaaa	gcaaaataag	1620
attataagta	aaaataaaaa	agagtataaa	aaaggaaaaa	aaaaaaaaaa	atttggagaa	1680
aattatatac	caatttttaa	tacacttata	agttttattg	aagtgatata	taaaaatgtg	1740
tttaaaaagg	ttttaataaa	aataagtaaa	agtaaaagta	taaatgattt	aaaattatat	1800
tcttatatag	aaaaaatata	tgaatataat	acataattact	gtcttaaaaa	tcgattgaaa	1860
aaattttgtt	ttacattatt	tttctcggtt	acttttaaaaa	atttaattaa	atgttatatt	1920
tgtaaaataa	aaagagaaga	attaaataaa	agcaactttg	agaaatttca	atcgacatta	1980
atatatgata	catgtagttt	tataaatata	tataatcagc	taggtcaaac	aaatttttaa	2040
gatataattta	gaaataaata	tgtaaacttt	ttaatatata	taaaaaatat	attaacctta	2100
ccatatgaca	aattgttgag	agtacctata	aagaacaagt	actttttttt	ttatattaaa	2160
aataaaagaa	tagatatacc	atttcaaaaa	tttttttaag	aatataaaat	aaaaaatgaa	2220
aaaatattcc	atgctaataa	aaatggaaaa	tcattattat	tgatagata	tcattatctt	2280
ttaaacgaag	caaaaggaaa	cactatgagt	tgtaggaaca	ctagtataag	ttctttattc	2340
tttttaaaaa	actcgaatag	tatgcatgaa	aaaatatata	atatcttgaa	aacatttaat	2400
cccttgaata	atgtgtattc	aaaagtgaat	gaggaagatc	aggaaggggt	aataaattcg	2460
tataacaatg	atgagtttga	agacgagtat	acttcgataa	aaacgtatga	tagtaaaaaat	2520
aatatataca	tgataatta	tgatgaaaac	gaggaacata	ataaggacaa	cgtatattac	2580
agtagtatca	gcagtacatc	aagtagtaaa	acggaaacga	atataagtaa	cacggatgtg	2640
tctactagta	gtaagagtag	ttgtaaatat	agaaataagg	atagtggtta	tagtagttaa	2700
ataataataa	gcagtgtaga	taatatgggt	aaccaagata	atgaaggtaa	taaattatgc	2760
agaaatgtaa	ataagggaag	cgattttaag	aaacgaaaaa	gtatatatga	agaaaaaaaa	2820
agggattata	tatcatgtag	tggtgataat	aaaaatgatg	atgataaaaa	tgatgataat	2880
aaaaatgacg	atgataaaaa	tgacgatgat	aaaaatgacg	atgataaaaa	tgacgatgat	2940
aaaaatgacg	atgataaaaa	tgacgatgat	aaaaatgacg	atgatgatga	taataaaaaat	3000
gataatcata	ataataatat	tagtagtagt	agtagtagtt	gtttagtagc	tttctccttc	3060
tcatataata	caattgatga	taaaaaaaaa	aaaggaaaaa	agaaaaaaaa	agaaaccgaa	3120
agctattatg	atgtcagcag	aatgatctat	atgaagaaaa	acaaaaatc	acaaaaatc	3180
caacaatat	ttcaaaagaa	aaaaaaaata	aataacaata	atatgaagaa	tccttttgaa	3240
-tgaatatta	atgaaaaaaa	aaatagtata	aaggatatata	taaagaattc	aaatcaacaa	3300

tatgatcgga	aaatattact	tttaaaagat	gataaaattt	attttttataa	ttcagaatat	3360
tccataacat	atgattcatt	ttatttttctt	atggaaataa	aaaaaattta	ttcatgtgat	3420
ggattttttg	attcattaat	aaattcggaa	aagttgagtt	cagttaattc	ttcctataca	3480
tcaacagaag	ataatgaatt	ttattcaagg	aaaaaagata	cactctcttc	agaaaagtga	3540
tggcaaaaat	gtggatatga	tgcaaaaatt	gtaagaaaat	ga		3582

&lt;210&gt; 375

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 375

atgccaaaga	aacgtagaaa	cggaggaagg	tccaaacata	acagaggaca	tgtaaatcct	60
ttaagatggt	cgaattgtgg	aagatgtggt	cctaaggata	aagctataaa	aagattcaac	120
ataagaaata	ttgtagatac	atcagcacia	agagatatta	aagaagcatc	tgatatattc	180
acttttcaat	tacctaatt	atatattaaa	caatgttact	gtgtatcatg	tgctatccat	240
tcacgttttg	ttcgtgtaag	atcaagagaa	caaagaagag	taagaaaaga	aacagctaaa	300
catgttaacc	catcccaatt	ataa				324

&lt;210&gt; 376

&lt;211&gt; 1560

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 376

atgttaaaat	atataaacia	aagtaaagct	ttgttattaa	gaaaaatgag	tactgtaaaa	60
aatatgtcta	aatcaaatca	attaactaag	gagattttta	tggccctaaa	ggaaaagacg	120
tccttactac	aaaaagaaaa	attgtatata	gaacctgttg	aagagaattt	atgtttatca	180
aatttagaaa	cgtcttggtc	tttgacatat	tttacgttaa	tgtataagag	caggattgac	240
accaatgttg	ttgagcttaa	ggttgtacca	aaatgtgaag	gatccaaagg	tacaaataat	300
tgatgttaa	ataataatga	caaaacatca	tttagtacag	ataagggttt	tattaatatg	360
aaagaagaag	gagaagaaga	aaaaaagaat	gaaacgaata	tgaatgttga	aaataagaag	420
gtagattttt	tgcattcatt	tgttcaattg	aatataccag	tggtgaaaga	ttttgaaaaa	480
gttttttttt	acaaacatat	cattgaactt	attgattctc	ttgcagctga	tgtagtatat	540
agacatagta	taggtgttta	taaaagaaat	gataaatata	atttcgtaac	cgtattattt	600
aataatttaa	aaacatatga	aaagaatgta	tttcatcatg	aattttcatt	tgctctacat	660
gattcatatc	cattaacaat	aaattgttat	attgtaaact	ctggaacaac	atcatatata	720
ttaaaacttg	atttttttca	acaaaataat	ttagtctttg	atatatatac	tacatttggt	780
aatgtgaact	gtttaacttt	taaacctcaa	caagtagtac	ctgtcttgaa	ctctatgcag	840
aatgaaaaat	ataaacaat	caaatcattg	tgttctcata	ttaaagatgt	acaaagtcta	900
tttaattaca	aagagggttaa	aagtaaaaca	ttacatccaa	atgatatgga	aattttatca	960
aattttttta	aaaaatatca	aacacaaaat	ttaggatata	ttaaaaatat	aatgaatat	1020
accaacatat	atgataatga	acaaaatgaa	ctagtacaaa	atagtaatga	caatatatta	1080
acaatatattg	attccatatt	aaattttaat	gatttttctt	ttcatgctgg	aaaagtacaa	1140
tatgcatgta	aagatacata	tgtacaatcg	aatcatttta	tatcatcaga	atttaagaat	1200
atacacaatt	ttacatttg	aggccatcta	gcttattgtt	ctttttgtca	tgcaatggta	1260
gtcataaaga	aattcttacc	caaaccaata	cttatgcaaa	ttaattctat	acaatatatt	1320
ttacctgtac	ctgtcaattc	agaagtatta	tataaaggaa	aagttgtata	ttctgatcaa	1380
cacagtatac	aagttcatgt	agctacctac	tgttttgatt	ttaaaaaaag	tgcttactat	1440
ttactacca	tttgtgatat	gtcatttgaa	aataattcag	acattttctt	tgtacctcaa	1500
tcacaagaag	agttcaaatt	atacatgcta	ggttatatac	gttcacagat	tctaccataa	1560

&lt;210&gt; 377

&lt;211&gt; 993

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 377

atggaaaata	ttccgtgggt	tgaaaagtac	cgaccaaaaa	ggttgatga	catcgttcat	60
caaaaataatg	ctgtaatgat	gttaaaggaa	ggtgtgagga	caaagaatat	gcctcattta	120
atatttcattg	gtcctcctgg	tacaggtaaa	acatcagcaa	taaatgcttt	ggctcatgaa	180
ttgtttggaa	aggagaatat	aagtgtgagg	gtattagaat	tgaatgcttc	tgatgataga	240
ggtataaatg	tggttaagaga	aaaaatttaa	gcataataca	gaataagcat	tagtaagaat	300
aaaatccata	gcgaaacaaa	agagggtatta	ccttcatgga	aattgggtgt	attggatgaa	360
gctgatatga	tgacagaaga	tgacacaatca	gcattaagaa	gaataataga	aatatattct	420
aagtgaacaa	gatttatact	tatatgtaat	tatatccata	aaatatctga	tccaattttt	480
tttagatggt	cttgttatag	gtttcaatca	atacctatta	atattaaaaa	ggaaaaatta	540

ctttatatat	gtcaaaatga	aaatattgat	atagtagacg	atgctttaga	aaaaattatt	600
gaaacaacgg	aagggtgattt	aagaagagca	gtttctatat	tacaattatg	ttcatgtatt	660
aatacgaaaa	ttacattaaa	ttctgtttta	gatgtatctg	gattaccatc	agataaatatc	720
gtatataaaa	ttattgatgc	atgtaaaatg	aaagatttaa	agcttggtgga	aaaaacagta	780
caagatatta	ttgaagatgg	ttttgatgta	gcttatattt	ttaaatcatt	taataattat	840
tttgttacga	acacagaata	tgaagattct	ttaaaatatac	aaatattatt	agaactttcc	900
agacatgatt	atcgattaca	ttgtggtgcc	acacaatata	tacaactttt	aagttttgct	960
tcacgggtac	attcgttatt	aaatagtgtg	ttaa			993

&lt;210&gt; 378

&lt;211&gt; 924

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 378

atggacagtt	atattgagat	gaaatcaaat	gtattaaata	aacaatatga	tatttataaaa	60
atacaaaatg	aatatgatga	aacgttggtca	atatatttcta	ttgatgataa	atattcggaa	120
gatgatatgt	taaaacaatta	tgaagagaca	agtgatattg	aacaagatta	tatgtaccaa	180
aaaataaata	cagataaattt	agataaatgt	gaatatgaag	ataactaatat	aggatatcttt	240
aattatatat	atgaaatgat	aacaaaaaaa	aatgaaatga	gaaaagaaca	aatgaaattg	300
acacttttta	gtataaatcg	atgtgtagat	ttttttaatg	atttttttatt	tcttataaaa	360
gttttttatg	aaatgaaaaat	atcagaaaaat	tctaatatgt	taaatcataa	tatatataaaa	420
ctttttattt	tatggctttt	attttttatat	gtttacatcct	tttttacctt	ttatttcctg	480
aaatattata	ttatgaattt	aataaccagaa	aaacatcata	acttatttttc	tttattttaa	540
gttttttaatg	aaataaaaaac	aatgcacccc	aaaaacattt	cagtattata	tttttatgat	600
cgtatacaaaa	gaacatatat	agttataaat	aaattttttg	aagacgtacc	tcaattttta	660
ttatgtttgt	tgtatattac	gttgaatgga	aaagacaaat	ttatcatttt	taatatgtta	720
tattcaatta	tatattttgt	gattaatgca	atatatcatg	gattaaatta	tccattaatg	780
ggaacgctca	attttattttt	ctcaacctac	cttttagagt	tatatataaaa	taaaaaaaa	840
aaaaaaaaata	tatatatata	tatatatata	tatatatgta	tgtattttatt	cctttgtata	900
tatatatata	attttatttat	ataa				924

&lt;210&gt; 379

&lt;211&gt; 2424

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 379

atggccgctcg	aaagtaaacc	aaacaattca	tcaaaagaaa	agaacgaaga	aatgatatt	60
ataaataaat	gtgatgattc	caataaaaata	atgggaaaag	aaaatatattt	tgctggtgaa	120
aaagtgggta	ttaatgaatc	tgggcataatg	agtaatgaca	atataaaataa	aatcaagag	180
aaaaacaaaa	aaaaaaaaaaa	aaaaaaaaaat	acacataaaa	aggtaaataat	aaataatata	240
catataaata	tacatacaac	taatgataaa	aataatggac	aggatattaa	caaaccagag	300
gtcatcgaga	gggacaatat	tattaatata	aaaaatgata	caaacaatat	tttggactcc	360
agctataatg	aagaaggaaa	tgagaacaac	aggaacgaca	taaataataa	taataataat	420
aataatatta	atattaataa	taataatatt	aataatagtt	gtagtaataa	ttatgggtta	480
aaaaaaaaaaa	ttaccctgct	taaaagaaat	gatattaaag	atgaagggtta	taacaacgaa	540
aataatacaa	ctctgaataa	taaaaataat	ttaaagaata	acaacaacta	taatgataat	600
agaaataaca	ataataataa	taaaaataac	attaataata	ataataataa	taattgctgc	660
tctgaaaaga	cactagaaca	aagagaaaag	gaatacaata	aaattagggc	taggatcttt	720
tccaattttta	ataaaaaaca	aaaaaatggt	cagaaaacag	aacaaaataa	tttaaatcat	780
acataatttaa	ataataatat	tattaataat	ataaacaatg	gagataacca	gtatgcatat	840
attaataact	tttatcatat	atatcataat	aattcatata	atcatattta	tagacaaaat	900
aatatttcta	tatgtaatat	aaataaccac	gcaccttaata	ttgaaaagtt	aaataaccga	960
tattattatc	atgataatca	tatagcttat	acaaattata	tgtactctac	acaaaataaa	1020
atgaacaata	tgaagacca	acagattggt	cattatggta	taaataatga	agataaacaat	1080
aataataata	ataataatat	taataataat	aataataata	atattaataa	taataatatt	1140
aataataata	atgttccttt	atgtattcca	caacttgaca	attataataa	aacaaaaaat	1200
aatttttaacc	aaggcacaaa	taatttttaac	caaggcacaa	ataattttta	caaagtcaca	1260
aataattttca	acaacgcaaa	aaaccataatc	aaacataaca	taaataatac	aaataaaaaat	1320
atagaacatc	tgaataatca	ttcaatatat	aattttgttt	atccagaaaa	taaaaaatatt	1380
tatgatgcaa	acggtaattct	tattaataac	aatatatctt	atacacaatt	aaaaatgaac	1440
aacaatataa	atttttaatat	acacatggaa	tcaccaataa	atcaacaaca	taataatact	1500
tttaaagtaa	ataatgatac	aaattttttt	aatgaacctta	caaataaaaat	gaaaaaaaat	1560
aataaagaaa	aaaaaaatat	acatttttaac	aataataata	ataataataa	taacaaatgt	1620
ttatataaag	atattaatca	aaatgatcat	aaataattcta	ttataaatatc	caacccaaat	1680
tttgatcata	tcaataacgt	caaaaaataca	gaacaaaatt	tacaaaaaaa	acacaataaa	1740
itgtctcaag	tttcgaaaca	atcaaaacaat	aaaaataata	aaaataatag	tcacttaaaa	1800



```

aaacaaatta atataaacac aaataataat atggataata aaaataattc acatatatca 1860
aaaaatgtta ttgttgatga taataaatta aagtcattctc atgcagataa ttcaaataaa 1920
atagttacaa agggaaaaaa aaagaaaaac accaataaaa aaaaaaaat aaataatc 1980
aatagtgatga ataattgtcaa taatatcaat agtatgaata atatcaatag tatgaataat 2040
attattagta tgaataatgt caataatatg aataatccaa tgtattttcc aaatgtaaat 2100
attcagaagg atgattcaaa tatagcattt ttatacaata acaagccaaa tatcgatttc 2160
aataattttc aacttaataca tataaataat catatgatac aaaataacat aatgacaaat 2220
aatgtttatgc taaacaataa tttgacaaca tctaatttta attataattt aattaactat 2280
tcatatgaac ccttttatga agaaaactta atgaacgact tagattattg tagagattat 2340
tctttatatg aaaaaagata tgacagaggt gataatttac aacaaaatca taagcgctat 2400
gatattgact ttcctcgtt ataa 2424

```

&lt;210&gt; 380

&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 380

```

atgaacacaa aatgttttaa taaatatatc ataatacatc tattattttc tttgatcata 60
aagagatata caagtcttaa tagataccac aatgtatgta aaataaaaaa tcagagctgc 120
tttcttaatc cttgtacaca caaaaacaat gacaaaagga attcgtattt atacacacat 180
tatactagaa ataattcttc aataaacata agaagaaata attttcttga taaacaaaat 240
gataatata ctgattatat ttatggtttg aattctgttt atgcagtact taagaaaaat 300
gagaggacca tagaggaggt cataaacata aaactgaata gaaaaatcca taaacaaaat 360
tacgaatata tatttgacga gctaaaaaaa agaaatgttt caatacaata tatggaaaaa 420
tataaaatga atgaactggt aggaggattt ccccataatg atataattat gaaaacacat 480
tatagataea tgaataatta taaagatttt attaaaaaca taaaacactt accaaacaaa 540
aataatattt ttatttggtt acatgatgtt tatgataata tgaatattgg aaatgtatgt 600
agatcaattt tcttttttgg aggtcataca atatttttaa aaaaaaaaaa aaaagttaat 660
gaaaaaaaaa acaacgtcaa aatcgacaca atggcaaatt ttatgaatca tatgaagctc 720
gagtttctaa atttttatca tataaacaaat cacaaaaaca atacttcacg tcataaatac 840
aatggcttta caatttattc aacaagctgt cacaaaaaca atacttcacg tcataaatac 840
ataaacctaa acaatattaa aataagagaa aacgaaaaaa tattgataat attaggaat 900
gaaagtaaaag gattaaaaga agatatttta gaaaactcag attattgtgt atatataaat 960
aatttaagtt ataataaaaa tactcaattt catatagata gtcttaattgt taataatgta 1020
tggtctatta tggttaaatca tttttattct atataaa 1056

```

&lt;210&gt; 381

&lt;211&gt; 1689

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 381

```

atgaaatata aaaattataa cagggccaca atactagaaa actttgataa gaaattaaat 60
aagaattata aagtttttaa taatgaggaa attaaaaaaa tggatgagga gtatgagcat 120
aagattaaga agaaggagca attaaaaatta caaaagaaac aaataaaaaa acaggaacat 180
aaaaatgaaa agaaaaaaa aaataaaaat ctaataaaaa aacacaatca aaataatact 240
aataatagtg ataattgttt ccataatagt gataacaata ttaatcaaaa tggtaattat 300
acaaataata gtgattataa tatcattaat aataatcatg ataattattaa ttttattcat 360
ggtaataaaa ataaaaacca tgataatagt tttcacaata atgatgacgt aaaaaatggt 420
gaagttaaga atcttggtac taatgaggaa agggaaaaac aaaatgttac ttttgaagac 480
ctaaatatat gtgaagaaat attagaaagt ataaaagaat taggatggaa aaaaccaaca 540
gaaatacaaa gagaaatatt acctcatgca tttctaaaaa aagatattat aggattaagt 600
gaaacgggaa gtgggaaaaac tgcttggttt attataccca tattacaaga tttaaaagt 660
aataaacaaa gtttctatgc tttagttata tcaccgacaa gagaattatg tatacagatt 720
tcacaaaact ttcaagcatt aggtatgaat ttattaataa atatttgtac aatatatggt 780
ggtgtagata ttgtaacaca atccttaaat ctagccaaaa aaccgaatgt aattgtgagc 840
aacactggta gaataactaga tcatttaaat aatacaaaaag gattcaacct aaaaaattta 900
aaatatttag tttttgatga agctgataaa ttattatctc ttttattttc agcaaccatg 1020
aataaattat tattaatatt accaccgaat cgtattacat ttttattttc agtagaggtc 1080
acaaaaaatg ttgccaaatt aaaaaagct ctccacatta atagaaacat atatttttct tctcttaaa 1140
tcaaataaat atagtactgt tagtttatgt tttcattacc aaacaagaaa tattattata 1200
tttacaataa cttgtgcaac cgctcaaaaa ttaaactttt tttgtagaaa tctaggacta 1260
aaatccatat gcctacatgg taaattaaaca caaaatcaaa gattaagttag ccttaattcc 1320
ttcaaagtta ataaatataa tatattaatc tcaacacaag tgggagccag aggactggat 1380
ctacaagata ttaaaattgt tataaatttt gatatttgct catgtaaaga atatatacat 1440
agagtcggaa gaacagcaag ggcagggaga tctgggaaat ccataacctt tgttacacaa 1500

```

tatgatgtgg aaaatttctt agcaatagaa aaacagttga ataaaaaaat tgataaattt 1560  
 acagaccttg atgaaaacga tgttctttta taccatgagc aaactattga ggcactcagg 1620  
 ttatcagaaa tagagatgaa ggaaaaccag gaattatata aaaaaataa atttaaaaaa 1680  
 aaaaaatga 1689

&lt;210&gt; 382

&lt;211&gt; 306

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 382

atgaaaagtg aagttaccat agaagaaaat agagataatc ctgaggacgg acccttaggg 60  
 ttattatcag aatgtgttaa agacaacgca cagggttctaa ttaattgtcg taataatagg 120  
 aaaaatattag gaagggtcaa agcttttgat agacactgta atttattatt aaccggggga 180  
 cgtgaaatat gggtagaagt tgtaaaagat aaaaaaaaaa aaaaaaaat taacaaggat 240  
 agatatatca gtatattatt ttttaagagg gattcagtta ttctaatttt aagaaatcct 300  
 aaataa 306

&lt;210&gt; 383

&lt;211&gt; 7143

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 383

atgggtaata cgaacagaaa agatataagt cacaaagagt atgataaaag ttttataaat 60  
 atcgagtctg ctgaagaaca taaaaatata aataaaaaata taaaaataa aaaattttatt 120  
 aatatcgata atagtaataa ttgtaataat agtaatagta ataatagtaa tagtaataat 180  
 aataataata ataataacaa tattgttaga aataataata attttataaa tgctgataaa 240  
 aaaaagaatg tcatattaaa tgaggatgat gatataaaaa ataaagaatt agtagatgaa 300  
 agctttgtga atatatTTTT ttatgaaaat ttttttaaaa accttttttaa tttaaatgat 360  
 gtgagtaata ataaagttat aaatattatt gaacaaaagg aaggagatga aaggaatgca 420  
 gataataatt taaaaaataa aaatattgta agagataata taaataaaat aaagaatacc 480  
 agaaatgtaa atgaaatatt aatatataat aataaatata ttattaattt tttaaacgat 540  
 actacaaaat gtaaaataga aattgctaatt tttatttctt tctatttttt ctttctacat 600  
 ataaaagata tattaaataa aaataatgat aatggattaa tgaataaaaa aaaatcatcc 660  
 cttaaggata tatgtaatat aaaatatata tataaaaaaa ttaagacatc caaaaaatat 720  
 atttcgtcta atgatatgga tacttgtata aggaattatt tatatcatat tgataagaaa 780  
 aattatccta ttattaaaaa aacaaaatgt cctttcttaa gtaacacaaa ggtttttat 840  
 aataaaagag gatatatggc ttcatgtccc ttgactgtca agggaaaaat aaagcataaa 900  
 acaaatatat cttctaagat taatttgaag agagaagaa atgatagtaa tatgtttaat 960  
 aatatgataa gaaaagataa taatatgaat gttaaacaag agcaaataca taataatgat 1020  
 actgttaata ataacatgac tactaacgtc gatgggtgct cggagcccac tcatgataat 1080  
 acccttcttaa atatatagga agaagaattt aaaatgttaa aaaattattt gaaagatgtg 1140  
 aaggagagaa aaaaaaaata taagaaagga tatattagca caagcaactt tatatcacag 1200  
 ggtgttagat tagggacgac acgatcgaga attagagggg aatgtttgtt aaaaaataa 1260  
 aagatgcata tgtatgatga taatgaagaa ttgaataaaa aaaaaaaat 1320  
 aaggatgatc gtatagaaaa tggcatcatg gaaagatgtga atgataagag aaaacttgat 1380  
 tgtgataata agattaaatt taatgatatt gaaaaagagg atcttaatat atgtgatact 1440  
 gaaaatgttg ataataatag taataataat aataataata ataataataa taataataat 1500  
 aataataata ataataacaa taataataat ggttataaaa aaaaaataa aaacaaaaac 1560  
 aaaaacaaaa acaaaaaaaa aaataaatta aacaattata atgataattt tgtatctgtt 1620  
 aatggttcgt atgataatta ttccattgat aataatgtga ttaatgatga gataagagaa 1680  
 aaaaaaaaaa ataataaaga agtgaaaaatc atggtagata agaataatga tacagaaaag 1740  
 gatggtaaca aaaagtatga tacatcgtaac tcttttaata taaagaatac tttgtctaag 1800  
 gtgttttata agaattatgt aaagagaaag ggaatgataa aacaacaaca taataatatt 1860  
 cataatacac ataataatata taatacacat aatatgcata atacacataa tatacataat 1920  
 gagaaggtgg tgttggttaga tgacacgaaa gagaaagcgg atcctatgaa tttaggtata 1980  
 tccttttcac ctgctggttt attaatacct attgctggtt catcagctgg tagtatctgt 2100  
 gaaaagaata tattaaatat gcatactagt aataaatgtt actttttaat agagaatatt 2160  
 gcatgttggt tgagcgtagg attaagtgtg aataaatgtt cagaagcttg aaaatatatt aaatatcgaa 2220  
 attagtaaat tatataagca tggatgttat atatacttaa ataactgtat agggaaatgtg 2280  
 ttaaataaat atttatatga ggatagttat tacaacaaat taaatataaa taatttttat 2340  
 tttgtaggta taacacaaat attaccttat gcactctgta atataacctat gtattttatc 2400  
 gatgataatg atttaatcag tgcaattatt aaatgcata atggcttttt tagtaccag 2460  
 agtaatatatt ttgtaaactt tcgaaataaa aataactaga acagaacgta ttattaaggt atctccgttt 2520  
 aaaaaagatt ttgggtgtcc aaataactaga aggtaataaa aataatagtg tcatcagtc 2580  
 gattctgatt atgtaggat tctttttatt tgtgtcaaga atatatttca taagtatata 2640  
 aaatataatc atatactttt tctttttatt



aacaacttgt	ggatagagaa	ggattatttta	tttttgattg	aaaacttgaa	ggatatatttg	2700
gaaaggaaaa	tatttgatta	ctacacattt	gttaagagat	actttacttt	tttaagaaaa	2760
aatgagacga	tagatgataa	gtatgaagag	gaggaatatg	aagatgaagg	tgaagaatat	2820
gaagaagagg	atgacgatga	agaagaggat	gaggaagagt	atgggcataa	taatgacaac	2880
caggatgacg	aaggagataa	aaacaaaact	actaacgaaa	agaataaaaa	aaaaaaaaat	2940
aaaaataata	ataataataa	taatattttt	aataataaca	tttttaataa	taatattttt	3000
aataataata	tgaatagttg	tgtgggtgta	agcgaaaaag	attttataag	tacatcaatt	3060
gttgctagtt	ttgccaatat	aaaaagacaa	atgaatgaga	aaatagaaaa	acggaaaaat	3120
gaaaagaaag	aaaagaaaga	gaaattacaa	aggaaaaata	tgaataaatg	ttcaaaaaat	3180
agaaatagga	atagatatat	aaataaagat	agtaattatt	atttaatgaa	tttaataaga	3240
ataaaattta	agaatttaaa	ttatatgaat	atgaattctt	ttgaaattga	atttatattt	3300
aaaaataata	atgatataat	tttacagttt	aataaacata	attataatgt	acaaaaattt	3360
tataattttt	cgataacggt	aataaatatt	atgagcaaat	attattccga	aaatttttat	3420
gcatataatt	tagaaaaaat	agttttataa	tttttattaa	ataataaaaa	ttttgaatat	3480
atagaaaaac	aatattcttc	caaagaagat	atgaatgaat	tggatatctt	agttaatacc	3540
tatgatatga	aatatgataa	aatttatagag	tttttaaaaa	ataatggata	tttgaaaatc	3600
gatagatata	tatatatttt	tcctaaacta	aaaacagata	ttatattatt	tttcttttaa	3660
gaaatttttt	tgaatgataa	tatatataaa	attgatagaa	aattttttaa	aaaaaatata	3720
accataatga	tcgaagtatt	aaaagaaata	ttttttaaa	aatatgttaa	aagggtgtata	3780
acaaagggtga	ttttttttcc	tgtacatatg	aaagaacatg	atcatgtaat	gaataaaaaat	3840
tattataata	atcaatatgt	aaataaatgt	aatatgttta	acacacgtgg	tgatcataat	3900
aataacaatc	aaactaatga	taatcattat	aatcatcatt	atgatgatac	ccataataat	3960
aataataata	ataatagtaa	atattataag	aataagaata	aaaataaaat	aatgtatgaa	4020
aaggaaagaa	aatcgctcat	tttattttata	tcgaataatg	ttcaagatgt	aaaacctata	4080
aaacatttatt	taaaatatag	tagtatatat	aaaaatttta	tttatattat	aagtgaataa	4140
aaaaatttta	ataataagat	aaccaaaatt	aatagatata	attattataa	ctatatgaat	4200
ttaaatatgt	atgatttgaa	tgatgtttat	ttgtttttgt	atgtttattt	atattcgaat	4260
gtatattaca	agagtttctt	ttcactgatg	aatatgcaat	atagggatta	cctcctgagg	4320
gcccgcagat	tatctcgaga	ggaaaaataa	atatccccaa	aagatgattc	tacagggaaa	4380
aataataacta	ctaataataa	tattagcaat	aataataata	ttagcaataa	tattacaat	4440
aataataata	ttacaatat	ttgtagtaga	gacaacaaag	gtaatcctac	aaattataat	4500
aatatatcgg	gaaaagaaaa	aaatcgaaac	attttttaga	aatggaattc	aaaggatttg	4560
aaaacgaact	ctaacaacta	tattgcaaca	aataagctat	ccaaaacatt	ttccggaatt	4620
tggctagata	aaaaaaaaaa	aaaaaatgac	aaaactatag	agagaaatga	aagtgtctgaa	4680
aataaaatag	agaaaaatat	aatagaaaaa	aatatacaaa	tagataatga	taaaagagaa	4740
tttaatatgg	ataatacaat	taaaaatgaa	aagagagaaa	gtgaaaataa	taataaacat	4800
atggaatgcc	ttcaaaatga	taatgataag	aatgttaata	ataattttta	gtttatagaa	4860
aataatggaa	caaatgaaat	aaaaaaggaa	ttatatagaa	atgatatgta	taatgatggg	4920
attataaaatt	ttgatattaa	caatgaatat	tttttccgta	atttaaataa	tatgaatgag	4980
tgtcaatttt	ttaagtacac	attattttgat	aagaacgata	atgtgtttga	tcataataat	5040
aataaggata	atacagatta	taataaaat	ttttataaat	tcgagaactt	gattattttt	5100
aattatgatt	ttacattgat	ttcaaaaatt	gaggactttt	atcaatcgaa	tagatataaa	5160
atatttgata	taaataagaa	aaagaaaaag	gaaatatttt	atcattttata	ttatatatat	5220
atatattata	gggatatttt	atttttattg	aagtttgttt	ttacattaaa	ttttgtgag	5280
aacacaaaat	ataaattttt	aaaaagaaga	gaaaatacat	ataaaaaaga	atataaggat	5340
atgaggggtc	cttatattaa	cttacatatg	gaacaaggag	gagataaaaa	gggaaaccat	5400
gaaaatatac	aacataggaa	gaataatgaa	gttgatattg	tgtataataa	taggggtgaa	5460
gatataagag	aaaatagaa	cgaacctatt	aaaaatggat	atgctgatac	atatgggaat	5520
atatacggac	atacacaaa	taattatcat	aattatcata	ataataataa	taatattaat	5580
aatgatatga	ctttgtgtag	tagaagtgtg	ttacaaaaga	gcaaacaaat	tagtttgcta	5640
aacaatccta	ctttttcttc	aaatattgat	gagaccttta	tggatagtgc	atctgatgtt	5700
aatgattatg	atatagataa	taataaaaga	gtgcaaccac	atttttatga	catatgtgaa	5760
catataaaga	aaccaccgaa	taatggagtt	aataatattt	atagtaataa	caatctttat	5820
ggtgatgata	acatgaatta	tcctacctca	agcaccggaa	aagggacacc	tagaagattg	5880
tttgaaggat	caaataatga	tggaaataat	tctgttattt	tatcgaaatc	tgaatatgta	5940
agaaagaaaa	gattaagata	tttagaaggt	aatgatagtg	attttggtga	ggacttaaaa	6000
acaaatattg	aagatgagtt	gtatgataaa	tataaaacat	attttggtta	gaatgtttat	6060
tctatgagga	aactatttta	aatagcttta	gaaggttctg	aagaaaaagt	tataaaaaaa	6120
atttatgatt	taggtaggag	cgatgctcat	ttatggttat	tcgtagaata	tttaaacgtt	6180
ggaatatatt	tataaaaaag	aattttatata	atatataata	aactacttac	agtttttgaa	6240
tctttaatat	atttaacaaa	tataaataag	aaaaaaaata	aagtgacat	atcaactttt	6300
ctcgcatcga	ttgaatatgc	tgtaatatat	gttaatggta	atccatttga	tttatttaag	6360
ttttgtaatt	tgcttggttt	atgttatata	tatttatagta	tgccttatgt	gaaagctcaa	6420
acatctgtac	tcaataataa	tgatgatcat	aaattaggta	cagtgtatga	taagaatatc	6480
atgaataaag	aatcagtgca	tgcaaatggg	atttcaaagg	agtttaattaa	aaatgataaa	6540
acaagtgaag	aattaagaaa	aaaggatgaa	aaaaaaaaaa	tgaaaaaaat	caaaaaagaa	6600
agcacttcaa	gtattgatat	ggatatataa	aattatgaaa	agggtaaaat	agatgtaaga	6660
caaaacattg	attataataa	taagaaagaa	gacaatgtaa	atagtgatca	tataataaaa	6720
agaaagaatc	gtattaaaaa	aacaaataaa	caaagaaata	ataaagagaa	attaaaaaga	6780
igtataagtt	tgccattaaa	tttaaaaaaa	acgggttgtaa	aaattattaa	tttaaaaaat	6840

aaaataaatt	taaataaaaa	tatcatagat	gctattaata	atgatatatt	aaaaggaacc	6900
ccatacgaac	acatatatac	acatttcta	ttttggatat	attcttcac	agatgagagt	6960
gatacatata	attgtttcaa	cgattattat	ttaaataatg	tagatcatgg	tagtaaagaa	7020
tttgataata	tttttgatca	aatgtcagat	gaactagata	atTTTTcgcg	cattttcta	7080
ttttttaaaa	ctttttaaaa	tctgggataat	agtttgagtt	tatctggata	ttttggtttt	7140
tag						7143

&lt;210&gt; 384

&lt;211&gt; 1449

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 384

atgactgatt	ttttaaggaa	tattcctaaa	cctaaaaaga	aggcgtatga	tgacgaaaac	60
gagttgcatg	atttttaaaga	aagtaataac	tccataaaaa	aaaaagaaga	aataaaaaaa	120
aagaatcaat	gctatgagta	tttaaaaaaga	agacatttaa	gaattacatg	taatgaagat	180
ttccaagggg	gaggagcata	tcccgaaatt	catatgaatc	aatatccgaa	taatattgga	240
ttaaagagcg	ataataaaaa	taatattgtt	ttaaaatata	ttgacgagaa	taacaacgta	300
aaatatgata	attttaattaa	tcaacaaata	catatatata	acaatgaaat	agataagatt	360
gaacctaata	aaagaataaa	taaatttaaga	aaaaaaaaaa	ttttatcaga	cacaaaagat	420
agagaagaaa	aataataatga	acctacttac	aaaccttaata	atgatgaaga	gaatgagatt	480
attgaaaata	cgaaaaggaa	tattgaaaat	atattaaatg	aaaaattaaa	taaaagtaat	540
attgttaata	aaaaagaaga	aaaaatattat	agatatatac	cacaaaataa	attaaataat	600
aatcttgaag	aaagaattat	aaaaattgta	gaaaaaggaa	cagatccttt	agatgtatcc	660
aaattttaaac	ataaaaaatt	accaaataa	aaaaactcac	cagattatcc	tatacttaga	720
tcacctacaa	ggaaattaaa	taaagaagaa	gaaaatgatt	ggaaaaatcc	accttggtgt	780
tcaaatggga	aaaataataa	aggatataat	attccttttag	ataaaaagaat	acaaagcgat	840
aataaaaaat	taaataatgt	tgtagttaat	gaaaactttg	ctcaccttag	tgaattatta	900
tatgttgctg	agaaaaaagc	tagagaagaa	atacaaatac	gtaatagtgt	tatgaaacag	960
aaaaaattaa	aagaaaaaga	agaaaaagaa	aatgtactaa	aaaatctagc	tatacaagca	1020
agaaaaagaaa	aaggtcttgc	acatagctca	ctcattaatg	atagaaagag	agaaatcgaa	1080
agagaataca	aaatagaaaa	aaatcttaaa	aaaatgaaaa	attatgaaaa	tagatatgta	1140
gaagaacaaa	ttgctcttaa	taaagttaat	gttagtaaaa	ataataatat	tcatgatata	1200
accttattca	atattaatga	acaaaataat	gtaacaacta	cacaagatga	tgatacttat	1260
caaatttatg	atacagccct	tttcaataat	aaaaataatg	ctaataatata	taaattctca	1320
agtgaagat	taaggaaaaa	tggtcaaaaa	atagaaacac	gagatactat	gcaacctgtc	1380
aaatatatta	aggatatatc	cgaccatttc	ggtctcgaca	gtttattatc	ccaagcaaaa	1440
aaaaaataa						1449

&lt;210&gt; 385

&lt;211&gt; 1281

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 385

atgtacgata	aaaaatatga	catattacta	ctgggggtgta	caggatatac	cggtcaaatg	60
gtgttagaat	attttttgga	aaattatgag	aaaaagatca	aaagtgaaga	aataaagcta	120
ttatgtggtg	ttaggaatat	aaaaaaacta	gacacctttc	tgtatactat	aaaagagaaa	180
aatgatgtta	tattaaaaaa	aataaataaa	aaagaaatag	atattaatat	ttatgaatca	240
attttaaatt	gttgtaaaat	atcaaaagta	gtaataagta	cgataggacc	ttatatctta	300
tatggataca	atatagtaaa	agcttgtgta	gaaggggggt	gtcattatgt	agacgtgtgc	360
ggtgaacata	atttttatatt	aaatatatat	aaagaattta	ataatatagc	aatagaaaaa	420
aaacttaaaa	taattcacag	tgcatcgttt	atctctgcca	ttagtacat	aggtaacttt	480
attatgcaag	aagaattttt	tcgacagtat	aaaaaaacat	gtccagtcac	aaaaatacgt	540
ttgtgtaatg	agggcaataa	tttaagaact	attggaaaaa	caactataaa	aagtgtctta	600
cttttttaaaa	aatatataaa	aaataattat	cataaatatt	atttatgtga	taataaaat	660
gatgtacaat	ataaagtttag	tggggaataat	tattttaaaa	aaccaaaga	aatacatata	720
aattcttttc	ttgattatga	aaaggaattt	ggttattgct	ttgatacatc	ttatttcta	780
atagaagaag	cttatgtatt	atggtctaata	tattttatga	attataagta	tggaagaagat	840
ctagttatta	attataaaca	atattgataca	cattttaagta	catccatgta	tatttttaag	900
aaagtatgtg	gcaagatatt	taattttttt	caatcctttt	tttttatgga	ttattttaata	960
aataaatata	ttgatttgtt	ttataaacc	aagactatga	atgaattgaa	aaaagcatat	1020
tggaatgta	taattgttgg	agaagataat	gataacgatg	aagaaaaaaa	aaagaaaaagc	1080
atttattttat	atttaagtgg	gaaaaatgaa	gaccctggat	atttgttaag	tgcaaaaaatt	1140
atttcagagt	cagctatttc	tttattaaaa	gaaaacgatt	tgccaaaaaac	atttggagta	1200
atttctgtgt	ctgtaggtct	tggaacggtt	ttggtagaga	ggctaaagaa	ggcctccata	1260
cacatgtcca	tagaaaaatg	a				1281

<210> 386  
 <211> 177  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 386  
 atgggaaagg tacatggatc attagcaaga gctggtaaag ttaaaaacca gactcctaaa 60  
 gtcccaaaagt tagataagaa aaaacgttta acaggaagag ctaaaaaaag gcaactttat 120  
 aacagaagat tttcagataa tggaggtaga aaaaaaggac ctaattcaaa agcttaa 177

<210> 387  
 <211> 1017  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 387  
 atgatttgtt caaattttatc tctgttgaga tatgttcatt tagtttatta cttttataata 60  
 atatcatttt gcattcataa taatattttct tgttttaaat tgaatcttac taaaacaaat 120  
 gaagatgcta atattataag acttaacaaa ttaattttcca tgaaaagaaa tatttcaaga 180  
 agaaaatcag atgaatttat taaagatgga aaagttaaaa taaacaataa aataataaca 240  
 aatccaggta cacatgtaca tataggaaaa gatagtttac gtatatacga caaaaaaatt 300  
 aaattaacaa atattataaa tatgataaaa caaatgaaa acaaattaca taaatggata 360  
 gttttacata aacccaaagg attattatgt acatccaatg atgaaaaaaa taggaaatct 420  
 atatacacac ttttccctga ggaaatgtta caaaagtatc gattagtaac agtagggaga 480  
 cttgatagga acacctcggg agtactacta ctcaccaacg attatgcttg ggtaaacaac 540  
 ttaactcacc caaaatatca aagaataaga acctatagag tacatatga aggtccagtt 600  
 aaaatgaacg cctcaaaga actagccaga ggtatctatt tagaagaaga tgaaaaaaca 660  
 caacccaaaa aaatatataa ttacaaggaa tcaagggaaa aatcaaacat agatgacaaa 720  
 aagaaaaaaa aaatgtcaaa aatgaaaaaa aaaacaaatc cagcttttat tgaaatcctt 780  
 aggggaagaa aaataaaaaat aaaggaagac accaaaaaaa ttaccgttct aaatataagt 840  
 ataaaagaag gaagaaatag acaaattaga aaaatgtttc aacaaattaa tcaaccagtt 900  
 attaaaatta aaagaacatc ctttgaaaat attacactca aaaatatata tttcccaaaa 960  
 caatataggg agttaaataca aaaagaagtc aatgatttaa agttgagaaa tttttaa 1017

<210> 388  
 <211> 2715  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 388  
 atgagttcga aggacaaaaa cttattcagc gatgacgaaa gcgatgatgg taggaaaaag 60  
 aagaggctga aaaaagtatc tagttccctta ttccatgatg acgatgatga taattttata 120  
 agtaataaaa aagtggaaaa atccaaatcg aaaaaaaaat gtgacgctat atatattgat 180  
 gataatgaaa gcaataataa taacaattat aataatacta ataaaagtag taataggaaa 240  
 tcattagaaa ataaatcatc gaaaacgtca ccgaaatttt atgatataac atcctttttt 300  
 aaacctctt caaaaaaact tgaggataat aacactatga agaaatctaa tagtaaggaa 360  
 gatgagaaac tcgttgtgaa taatcttaat gactatttta atatattaca aaatgataat 420  
 aaggtcacta aagaagacac aaaaagtaac aacgttagtc ctaaaaatga aatcaataaa 480  
 tcaaatgtta aaagagaaaag agaaagtga caatatgaaa ttagtagtga aaacgatata 540  
 gtttcaagta aaaaaaatgt tcttatatct cctgcaaaaa aacaaaaaac tcaaaaat 600  
 aataatgaag atttacaata atttgattat ttaccttttc ataatacaaa atttgtaatt 660  
 acaggagtat tcaaaaattt tacaagagat gaattacaat ctaaaattaa agaacatgga 720  
 ggtagtgtta tgacagctgt atcgactaaa acgaattatc tagtccatgg ggaatatcta 780  
 gaagatggaa gattatttaa cgaaggtaga aaatatacta aagcttttga attacaacaa 840  
 caaaacaaat ctaatatcaa aatattaaat gaagaagaac ttttgaaatt attaccacaa 900  
 actgatcaaa cacaagaaaa tgataaaaaca tatgcactcg atacaattaa aacggaaaat 960  
 aaagataaaa attataatta tgaaaagaaa gatataaaat ataattatga aaagaaagat 1020  
 acacataata cacaaaacga aattcttaat caattgtggg tagaaaaata tagacctaaa 1080  
 aatctcaacg aattagtagg taataatcaa aatgtaataa aattacaaaa ttggcttgct 1140  
 agttgggaag atgtatgtat taaaggaata aagaaaccag cacaaaaaac atttagagga 1200  
 attttcgaaa atgtaaatgc aagatgtgct ttattaagcg gtccagcagg aataggaaaa 1260  
 actactacag ccaaaattgt ttcagaagca tctgggtata atgttatcga atttaatgca 1320  
 tctgatgaaa gaaataaagc tgccgttgaa aaaattagtg aaatggctac aggtggatat 1380  
 tccataatgt cattaaataa tcgtaaatta acaaaaactt gtattattat ggatgaagta 1440  
 gatggtatgt ctagtgggtga taaaggtggg agtacagcca tattgaaatt aatagaaaaa 1500  
 acaaaatgtc caataatatg tatatgtaat gatagacaaa ataataagat gagaacatta 1560  
 caaaataaat gttatgattt aaaatttagt atgcctcaaa aaaatagtgt tgttaaaaga 1620

ttattagaaa	tatgtaaaaa	agaaggaatc	atgatggaac	caaatgcttt	ggaattatta	1680
tgggaaagta	catgtggtga	tataagacaa	atgttgaata	ctttacaatt	attatctaaa	1740
acatatacaa	gaatacaatt	cttggtttta	aaaaaagaat	taaataattc	taataaaaaat	1800
atacaatcat	tagcaaacc	atttgaaatt	acattaaaaat	tattaaattt	taatgaatca	1860
tccaaattaa	atataagaga	aattatggat	cttttttttg	ttgattatga	attaattcca	1920
tatttttatta	gtgaaaatta	tacaaatgtt	tttaatgaaa	cagataaatc	atctgcatct	1980
ttaaataaat	ggaatgtatt	ctcaciaaatt	gcacatgatt	tatcattagc	tgataaaaatt	2040
aaatataata	tgaaatcaaa	tatggatttt	gctctattac	ctcatttcgc	tattttatca	2100
tgtgtttgtc	cagttatgag	aataaaaaata	ttaaaatcat	ttatgtctgg	aagagttaatt	2160
ttcccaacag	catttggtaa	aattttccaca	tttaataaaa	ataaaaagatt	actaaatgaa	2220
ctatgtttta	atctatcata	taaattaaat	gtatgcccta	aatatatggt	cacatcagga	2280
ttcttaaat	atatctattt	taaaattatg	acacctttac	ataaagcaga	tgtaaatcaa	2340
gctatccaaa	ttatggaaga	atacagtatt	acgcgagaaa	tggttaaccga	aaattttacct	2400
tgcccttagat	taccaaataca	agaaaaccta	tatgataaac	tagatacaaa	acttaaatca	2460
tcctttacca	gactttataa	ctcttcacat	gttatcaaaa	ttgatcctaa	ttctatgaaa	2520
aaaggattaa	aatcaagtga	aaaaaaaaaca	acatttaaat	taaagtgtt	cgagtctgac	2580
gaagatatag	atgaactaag	tgaatccaaa	gaagacaagg	atgatgatgt	tctaatacaa	2640
acaaaaatag	acagaaaggg	taccttaaaa	acaaaacctt	ctacaaaagt	aaaatctatg	2700
aaaaaagcaa	aataa					2715

&lt;210&gt; 389

&lt;211&gt; 675

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 389

atgtctgaac	gtttacaaca	tcatcatgtc	aaaaatatta	cctctcaacc	tttgagcagt	60
gatttaaatg	attattcaac	agaagatgaa	gaagtgatga	atatcttaag	taataatatg	120
acacataata	acaacttaac	ttccaacaat	agtaatgtaa	accaagttga	aaacaggaca	180
aacggtgaac	atagaaatgt	attaattaat	aatatggatg	atacagatga	aatgaacaaa	240
ataaatgaag	aacaatatga	tagattatct	gatgaagaaa	ttaatgataa	acttgataat	300
ttagatgaat	ctgttagtaa	aaaagatatg	tatattatat	ggtttaattt	ttctaataat	360
tgtaggaaaa	aatattataa	tatgatagat	aatgtatgga	cacgatttga	atccttgtgt	420
tcttatcata	acattccaaa	aaaaatttta	tttaaatatt	ggaataaagc	atataatgat	480
cttatatgta	catttcataa	caaagattat	atttcgatga	aacaattcta	tgaattattt	540
gataaaaaatg	aatgttcacg	taataattat	attcaattca	ttgatatctt	aggagaatca	600
tggtataacc	ttacaaaaaa	aatggaaaat	aaatggaaca	caatcttaca	aggaaacata	660
ataaaaaggta	cataa					675

&lt;210&gt; 390

&lt;211&gt; 858

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 390

atgaacaatt	acataaatat	gaacaactct	caagcactta	tgaaacgaac	ccataaaaaga	60
aaccttgctc	aaaaattcaa	gaaactgatt	caaaagaaaa	tcctcggaaa	atctttcagc	120
tcacgcacaaa	atgaaaaagg	ggtccctcga	gaaaatgttg	atagtactac	tacttcatac	180
aacagtggat	atcttatctta	taaagaaaag	aaaatagggt	ctcaaagtag	gaataagcgt	240
attaatagta	aaaataataa	cgactccaat	aaaaacaaaa	aaaatgacta	ccagatagtt	300
gggatcaaac	aaaacaaggg	aaagaaatat	aataaaaaag	gtaataatat	aaatggcaaa	360
aaaaaaaaaat	atacaatcaa	attattttta	agaatatattg	atgatgaaaa	aatggagtat	420
attaaaaatc	taacagatga	aaaaatagat	ataatgattc	aaagaataca	taaggatatt	480
actaaggata	aactgttttc	catatggata	aacgttcggt	ataattatgt	aagaaaaatat	540
gtagatatga	tgaatgaact	ttgggtcatat	gtaaaagaag	aatcagataa	aaataatttc	600
tcagatatgt	cttttaataa	aatatgggtg	aaatttatatc	ctgaacttat	atctgaattt	660
agagaaaaaag	ataataacaa	ttataatgac	tttttcagta	tatttaataa	agaaacatgt	720
gatccagata	tatatatcaa	ttttattaat	acaacaagaa	aaaactggaa	tgaaattatt	780
tgtgtcatga	gatataaatg	gatcacaatc	attcctttta	atttcccccc	aaggaagtat	840
aaatatatac	atgtataa					858

&lt;210&gt; 391

&lt;211&gt; 693

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 391

atgaataaaa	aaaattattg	cattaaccca	aataacctta	atagaattaa	aagtaacgaa	60
tacaataaaa	atgttccgtc	aaatatattg	gatgtaaata	tgaagaatat	gaaaaaaagt	120
acaaatgcta	tagataagtt	gtttctgttc	ataaagaaag	cttttatggt	tggtctaata	180
atttgcgtat	tccaatattc	attttttaat	tctacattta	gtacaaatga	taataagaac	240
cttgagagaa	ttaatgaata	tataataaagc	cgaaatttaa	ttgaagatag	tgaactttta	300
aataaatcct	gtgtacaggt	aaaagaaaat	atagttgata	agattgaaaa	tatttatgaa	360
agtaaaagga	atgatttcat	ttctaagggtt	acagaatttt	ttaaaaagat	aagtaattat	420
attgaaaaag	aaatacgtca	agtattaaca	tattttaagg	aagggaaaaa	agatacagtg	480
aaaagtgggtg	taaccttttt	taatagaatt	ataggttttt	ttaaagggttt	aaaaatattt	540
tcaatgcccc	tattaacaac	agtatcagca	attttactat	tcaaatttaa	atatcagtta	600
gcattccatat	tatttggatt	tttaccatta	ttatcatgta	tgttttattat	gtacaaaata	660
ataaaagtga	atagtgaat	gtccaaaaaa	taa			693

&lt;210&gt; 392

&lt;211&gt; 4677

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 392

atgacaaata	gtaattacaa	atcaaataat	aaaacatata	atgaaaataa	taatgaacaa	60
ataactacca	tattttaatag	aacaaatatg	aatccgataa	aaaaatgtca	tatgagagaa	120
aaaataaata	agtacttttt	tttgatcaaa	attttgacat	gcaccatttt	aatatgggct	180
gtacaatatg	ctaataactc	tgatataaac	aagagttgga	aaaaaaatac	gtatgtagat	240
aagaaattga	ataaactatt	taacagaaagt	ttagggagaat	ctcaagtaaa	tggtgaatta	300
gctagtgaag	aagtaaagga	aaaaattcct	gacttattag	aagaaggaaa	tacattaact	360
gaaagtgtag	atgataataa	aaatttagaa	gaagccgaag	atataaagga	aaatatctta	420
ttaagtaata	tagaagaacc	aaaagaaaat	attattgaca	atttattaaa	taatattgga	480
caaaattcag	aaaaacaaga	aagtgtatca	gaaaatgtac	aagtcagtga	tgaacttttt	540
aatgaattat	taaatagtgt	agatgttaat	ggagaagtaa	aagaaaatat	tttgaggagaa	600
agtcaagtta	atgacgatat	ttttaatagt	ttagtaaaaa	gtgttcaaca	agaacaacaa	660
cacaattgtt	aagaaaaagt	tgaagaaagt	gtagaagaaa	atgacgaaga	aagtgtagaa	720
gaaaatgtag	aagaaaatgt	agaagaaaat	gacgacgaaa	gtgtagcctc	aagtgttgaa	780
gaaagtatag	cttcaagtgt	tgatgaaagt	atagattcaa	gtattgaaga	aaatgtagct	840
ccaactgttg	aagaaatcgt	agctccaact	gttgaagaaa	ttgtagctcc	aagtgttgta	900
gaaagtgtgg	ctccaagtgt	tgaagaaagt	gtagaagaaa	atgttgaaaga	aagtgtagct	960
gaaaatgttg	aagaaaagtgt	agctgaaaat	gttgaagaaa	gtgtagctga	aaatgttgaa	1020
gaaagtgtag	ctgaaaatgt	tgaagaaagt	gtagctgaaa	atgttgaaaga	aagtgtagct	1080
gaaaatgttg	aagaaatcgt	agctccaact	gttgaagaaa	gtgtagctcc	aactgttgaa	1140
gaaattgtag	ctccaagtgt	tgaagaaagt	gtagctccaa	gtgttgaaaga	aattgtagtt	1200
ccaactgttg	aagaaagtgt	agctgaaaat	gttagctccaa	ctgttgaaaga	aagtgttgaa	1260
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	1320
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	gtgtagctcc	aagtgttgaa	1380
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	1440
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aagtgttgaa	1500
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	gtgttgaaaga	aatcgtagct	1560
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aagtgttgaa	1620
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	1680
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	1740
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	1800
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	1860
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	1920
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	1980
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2040
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2100
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2160
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2220
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2280
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2340
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2400
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2460
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2520
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2580
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2640
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2700
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2760
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2820
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	2880
ccaactgttg	aagaaatcgt	agctccaagt	gttgaagaaa	tcgtagctcc	aactgttgaa	2940
gaaatcgtag	ctccaagtgt	tgaagaaatc	gtagctccaa	atgttgaaaga	aagtgttagct	3000

gctgttgaaa	taaatgacat	tactagcaaa	cttattgaag	aaactcaaga	gttaaattgaa	3060
gtagaagcag	atttaataaa	agatatggaa	aaattaaaag	aattagagaa	agcattatca	3120
gaagattcta	aagaaataat	agatgcaaaa	gatgatacat	tagaaaaagt	tattgaagag	3180
gaacatgata	taacgacgac	gttggatgaa	gttgtagaat	taaaagatgt	cgaagaagac	3240
aagatcgaaa	aagtatctga	tttaaaagat	cttgaagaag	atatattaaa	agaagtaaaa	3300
gaaatcaaag	aacttgaaaag	tgaattttta	gaagattata	aagaattaaa	aactattgaa	3360
acagatattt	tagaagagaa	aaaagaaata	gaaaaagatc	attttgaaaa	attcgaagaa	3420
gaagctgaag	aaataaaaaga	tcttgaagca	gatataattaa	aagaagtatc	ttcattagaa	3480
gttgaagaag	aaaaaaaatt	agaagaagta	cacgaattaa	aagaagaggt	agaacatata	3540
ataagtggtg	atgcgcataat	aaaagggttg	gaagaagatg	atttagaaga	agtagatgat	3600
ttaaaaggaa	gtatattaga	catgttaaag	ggagatatgg	aattagggga	tatggataag	3660
gaaagtttag	aagatgtaac	agcaaaactt	ggagaaagag	ttgaatcctt	aaaagatggt	3720
ttatctagtg	cattaggcat	ggatgaagaa	caaatgaaaa	caagaaaaaa	agctcaaaga	3780
cctaaattgg	aagaagtatt	attaaaagaa	gagggttaaag	aagaaccaaa	gaaaaaaata	3840
acaaaaaaga	aagtaagggt	tgatattaag	gataagggaac	caaaagatga	aatagtagaa	3900
gttgaaatga	aagatgaaga	tatagatgaa	gatatagaag	aagatgtaga	agaagatata	3960
gaagaagata	aagttgaaga	tatagatgaa	gatatagatg	aagatataga	tgaagatata	4020
ggtgaagaca	aagatgaagt	tatagattta	atagtccaaa	aagagaaacg	cattgaaaag	4080
gttaaaagaga	aaaagaaaaa	attagaaaaa	aaagttgaag	aagggtgtag	tggtcttaaa	4140
aaacacgtag	acgaagtaat	gaaatatgtt	caaaaaattg	ataaagaagt	tgataaagaa	4200
gtatctaaag	ctttagaatc	aaaaaatgat	gttactaatg	ttttaaaaca	aatcaagat	4260
tttttagtga	aagttaaaaa	cttcgtaaaa	aaatataaag	tatttgctgc	accattcata	4320
tctgccgttg	cagcattttgc	atcatatgta	gttgggttct	ttacattttc	tttattttca	4380
tcatgtgtaa	caatagcttc	ttcaacttac	ttattatcaa	aagttgacaa	aactataaat	4440
aaaaataagg	agagaccgtt	ttattcattt	gtatttgata	tctttaagaa	tttaaaacat	4500
tatttacaac	aaatgaaaga	aaaatttagt	aaagaaaaaa	ataataatgt	aatagaagta	4560
acaaacaaag	ctgagaaaaa	aggtaatgta	caggtaacaa	ataaaaccga	gaaaacaact	4620
aaagttgata	aaaataataa	agtaccgaaa	aaaagtagaa	cgcaaaaatc	aaaataa	4677

&lt;210&gt; 393

&lt;211&gt; 3045

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 393

atgaaatatt	ttaagaaatt	taaatacttt	ttacccaaat	atatttttaac	taatgatgat	60
gaaaaataaaa	acaaatatgc	ctcacataaa	atatataaatt	tgaataataa	gtatggaaat	120
ttttttaaatt	tgatcatttg	tctacccttt	attttgataa	cagtattatg	gatcttttta	180
accatatcta	tattcgttaag	tcaaacaaaa	aaaagaaaaa	aaaagaaaga	acaaaaataa	240
agtgttatgt	taatttatta	ttatgtatat	aagtcatgta	tagtaccgct	cgattctata	300
tattttaagat	cattgtgtga	aagtgttaga	tccaaaaaatt	cgaatgatac	tattaaagaa	360
cctgtatttaa	aaaataaagt	attttcatta	cgaatgaaa	agaaattaac	caaatctgaa	420
gatatatgtg	ataataatgt	gaattgtatt	tttaaaattta	atgagaaact	gattaatgat	480
ttagaaaaat	ataaagtgtc	gaatgaaaa	gatgtaatgg	cgtatgtaaa	aagctattct	540
gtttataata	ataataataa	taataagaaa	gatgatattt	tagatacaaa	aattcataat	600
ataggaaaaa	atggagaaga	tattattaag	actatggaaa	ttttatgggt	agaatttatg	660
gagaatgaaa	aagaaaaata	ttatttggtta	aaaggtcgat	tatataaata	taataataag	720
tttaaaatgg	aaaacaaata	tactgatgaa	tattttccaa	gaaaaaaatg	gaataattat	780
aatgacctta	tatataaagg	ttctaaggat	cttgaggaaa	aattaaataa	aatgttttat	840
gaatgggtaca	aacaagagaa	tttaaaattta	gaggaatata	gaagattaac	cgtttttgtg	900
agaacaggtt	ggaaagcttt	atataattat	gtggaaaaaca	tttgtaagga	aattttctat	960
tccgatttgg	atataattaa	aaacaaaaag	ggatccaaca	tgaaaaaagg	attatataat	1020
aatgaatata	aaaataatgg	taaaaatata	ccttttaata	cttcattctc	tattgataat	1080
aaaaaattat	ataattcttt	tggaaaattt	gagaatccta	tgtgctttta	ttatgaagac	1140
agtctcacga	cttcatgtta	tattgatgaa	aacaaatccg	attcatccta	tgaaactgaa	1200
gaaaatgtaa	actataataa	taaaatgggt	aaacgcaaaa	atttagtaga	atcacaaatt	1260
gtaggcaaat	cgaataatat	agaagaaggt	gaaaatgttg	aataatttaa	aaataataaa	1320
aaaataggag	atgatgaaat	gttacaagat	tatgaaaaag	aaaaattaaa	aaagaaaaag	1380
tggactgaaa	aggaggagca	aacaaaaaaa	gtaaattatt	ccgaaaaagt	aatcattcc	1440
gaaaaagtaa	atcattccga	aaaattaaat	cattccgaaa	aattaaatca	ttccgaaaaa	1500
ttaaatcatt	ccgaaaaagt	aatcattcc	gaaaaagtaa	atcattccga	aaaagtaaat	1560
cattccgaaa	aagtaaatca	ttccgaaaaa	gtaaatcatt	ccgaaaaagt	aatcattcc	1620
gaaaaattaa	atcatcccaa	cagagaaaaag	cattcccgaa	aagaaaaagca	taccgaaaaa	1680
gacgataaac	gaaacaactt	caaaaaaaac	aatgatgtat	tagaaattat	ggatataata	1740
agatatgatt	cttcagatga	accagagaat	tctaaaaata	ttggtaaaaa	aaaaaaaaaa	1800
aaaaaaaaaa	acattttcaa	aaattttgaa	aacgtggcaa	attcacgtgg	aagtaagaat	1860
tttaaaaacg	tattttctag	aaataaatat	actttagaag	aagaagttaa	ttccgtttgt	1920
aaagatggat	ttaataaaaa	aaagggtattg	ataaaaagtaa	atatgttgtc	caattctgat	1980
gataatactt	ctattagcga	tgataattct	gatacatgtg	ttgataggac	atattatgat	2040



ttattaaatg	tggaaccgga	tgcaagtttc	gatgaaatta	aacatagtta	tcgtaaatta	2100
gccttacagt	atcatccaga	taaaaatata	aatgatcctg	aagcaaatga	gaaatttcaa	2160
aaaataaatg	aagcttatca	agtattaaagt	gatgaaaacc	gaagaaaaat	gtatgatgaa	2220
ggtggaatga	aagctacaga	aaatatgttt	tttattgatg	cagctacctt	ttttacgatg	2280
atatatagtt	cagaaaaact	taataaatat	attgggtattt	taaaaataac	aacctttgtt	2340
caaatattat	atgaaaacaa	aatatctgct	gataaattag	ataattccaa	agattttaata	2400
caaaatgtct	tagtgaacga	tcaaattaaa	agagaagttg	aattagctgt	tttattaaaa	2460
gagagattac	aaccgtatgt	tgatggggat	gaaaattggg	tgataaatat	gagaaaagaa	2520
attaaaggat	tactagattc	gtccttttcc	gaatctattt	tattattccgt	aggatgggta	2580
tataaaaaata	tatctagtag	atatataaaa	aaaatgaata	gtatttttagg	tttaaaagca	2640
gtgagaggac	atatgcaagc	ctattttaagg	tgtgcagaga	atatatatat	gggaaagcta	2700
gcatttaata	aaattcttca	aggttttaac	ttactttctg	gttttagaagg	tgaggagctt	2760
agtatgaaat	taggagatat	aatatgtgat	gctttaagat	taatgtttgtg	ggatatagaa	2820
tcaacagtta	aagatgtagc	taagcggggt	ctacgagata	aagcagtagc	taagaaaaat	2880
agattaaaaa	gggctgaagc	tatgttaata	tatgggaatt	taatgctaga	gatatctggt	2940
attagtggta	ttgattttat	acattataaa	gtggatggca	tgaaaattat	agaaagtgca	3000
ttaatgaaat	caatacaatt	tagtgaaaat	ccagaggaaa	attaa		3045

&lt;210&gt; 394

&lt;211&gt; 1974

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 394

atgaaaaaaa	agtgtttttat	aaacttatta	atttatatgt	ataatatgac	attaatatgt	60
ggaataccat	atatgttctt	gatggttgtg	tgtgtgaata	aattatatgc	cttttttgc	120
tatacatctg	atgaaagaca	tcaaagaaat	ttgtatacag	cagaatgttt	aattaaaaat	180
aagggaatcat	attccttaga	aaaaaatgac	tcttcatcaa	tagataatta	ttataagtct	240
attcagaatg	caccttatat	tgatgaagat	atagtagata	attataaggg	tgaattaaag	300
gaattaatta	aaataaataa	aatgatata	tctaataaaa	taataaaaaa	tgatacatta	360
aatgatttga	aaagatcaga	tgaatttcat	aatagaaatg	aattacataa	tagagaaggg	420
agtgaagta	aatatgtttc	aaatatatca	gcaaaggaaa	tgacgaatca	agataattgt	480
agaaaatctt	cgcataataa	aaagagagga	tattcttttag	aaaaagaatt	agaaaaatta	540
tatagaattg	cattaataaa	taataataat	accaatatag	ataataatat	aaatatagat	600
aataatataa	atatagataa	taatataaat	attgataata	atataaacat	agataataat	660
acaaatatag	ataataatat	aaatatagat	aataatacaa	atatagataa	taatacaaat	720
atatgtgttg	attacacata	ttatgatata	ttaaataataa	atgcgaattc	taaattagaa	780
gaaattaaag	aaaaatatta	tgaagttagt	tcaaaaatac	atcctgaaaa	aaatatggga	840
aatgataaag	cttttaaaaa	atttgaacta	taaaatagtg	catatcaaat	attaagtaat	900
gaagaattga	gaagaaaata	taatatgtat	ggacgttcta	aaatgaataa	tacaaattta	960
atagatccgt	ttgtattatt	tatgttatcc	tatatatcaa	taaatatgag	tgaatatgtt	1020
ggtaaatata	aaatagaata	tcttattgaa	gagtcatttg	aaacaaattc	aaacttttat	1080
gatttattat	tatcaaataa	aattatgaat	aactatttaa	atgtcgaaca	aaaaataaga	1140
gaagttgaat	tagcttttatt	attaagagat	agattagaaa	catatttaga	gggggatgaa	1200
aattgtattg	taccaataaa	aaataatatt	agagcaatac	ttgaatattc	tttttctttt	1260
tctataatga	attttgtagg	atggttatat	gaatatctct	ctaaacttta	tatgggggtat	1320
aatatagaat	tatctttaat	gaatgacaat	aaaggaataa	tggaaaattt	gttttagaaat	1380
atagttaaaa	aggaaatgca	taaaaattta	ttaaataaaa	acaatgtgaa	tataacaaaa	1440
gattcagatg	attttataat	tatagatgaa	aaggaccata	ataatgaaaa	tatcaaaaaat	1500
tgtactgtct	tatttaataca	tattagatca	aataatgaga	ataatataaa	tttagaagac	1560
atgacaagaa	acgtacttat	attaattata	ttagatataa	aattagtaat	aaaaaaagct	1620
ggtgaaaggg	ttttatgtga	taaaggagta	agtcgaattaa	ctaggaaaaa	acgagcaaaag	1680
ggtttgatga	gtttagggaa	ggaaatacaa	aattatacac	aaaaaataag	agacaaggat	1740
tataagatta	taaatgagaa	tacaaatatt	ttggaaagta	taattgagga	tataaaaaaa	1800
tatatggaaa	tagataaaat	gaatttttta	aaagaaaaag	ggaaaaaaga	aatagataag	1860
atattttatt	ttgtaggaaa	taatataatac	cgtaataaat	tgaaacgtaa	tataaatgaa	1920
aatgcagac	tactaaagtt	tttgaaatat	atgattaatt	cgacggaaga	ataa	1974

&lt;210&gt; 395

&lt;211&gt; 678

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 395

atgaaaagtg	taaaaatggg	ttattcaaat	aataaattta	atattttttac	attatgggaat	60
aatattattt	tgtatttcat	tcttatagtt	acattttac	tttataacaa	gtataatggg	120
gaaaaatcaa	acataggggc	ttcattttaat	tttggaaata	atagatcatt	agcagaatat	180
tataacaaca	aagatgggta	caatgtatta	agagtaaatt	tggatcacia	aaatcttaaa	240

gatgtcttag	ggaatatgca	tcctgaaata	aaaatggtag	aagttgattc	agaaaagtga	300
tgcccaggta	caaatgaagt	taattttaaag	gttggttacga	atataccacc	agatatgatt	360
aaagtaaatg	caacaagtga	aaatatgtca	gtaggacaat	gggattatat	tatgcaatat	420
tatggtcaat	caacaccta	ggaagtatct	aaattagatt	cggaagtaaa	agacaaaata	480
gaaaagaaaa	ttaaaaagaa	gaaaagaaaa	acacctttaa	taagatatat	tgcagaactt	540
gtaggttatg	gtattatitt	cattcctggt	tttcctgttc	ttgttggtat	agtaagtgtt	600
ggattctgta	tattgatctt	tatgggtaaa	aaatctgcaa	aaaattatit	tagtacaatt	660
aagaaatggc	tttttttaa					678

&lt;210&gt; 396

&lt;211&gt; 981

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 396

atggtctcat	ccgttaaate	atcattgttt	ttattaattt	tctttttata	tttaaaaaaa	60
aatgtttatat	gttctataaa	tgataatgta	aatgaaaata	taactgaagg	gttagatgaa	120
tatgaatttg	gaaatgaaaa	tataaatgaa	agcataactg	aaaatgtaaa	tgtaaatgta	180
actgaaaatg	aaaaagataa	tttaattttat	aatgatgata	ataataatat	tgaagagtta	240
aaatccatga	ttggaaatga	tgaattacat	aagaatttaa	gcatacttga	aaaactttat	300
ttagattctt	tgaaaaagga	taaattaaaa	ctccccttaa	taaaagaagg	aactgaagaa	360
tatttgata	tatctaaatt	taaaaaaaaa	atattaactg	attctgatga	taaaacatat	420
attttaccga	cattggaatc	tagttttttat	gatattacaa	aatatgaaca	catattaaaa	480
gaacaattaa	tagaagaata	taattcaaaa	atatctgatg	cagtaaagaa	aaaactactc	540
attgtaagaa	cattgaaaac	tataaaatta	atgctttatac	cattaaatgc	atataaagaa	600
aagaatgatt	tgaaaattgc	actagaagaa	ttaaataatg	taatcacaca	tagaacatat	660
gaaacactaa	aaaaaagtcc	aattgagaat	cctggagagt	tttttaggaa	attgtttaact	720
catgttaaag	aagtttaaaga	atcaaaaagag	atagaaaata	agggagagta	tttaatttta	780
ggaaatgata	aaattgaaat	aatggatgca	cacgattttct	tttttacaac	gaatagtaat	840
ataaaattca	tggaaacatt	agatagtata	tcaaatcaat	atggattggg	tttaattaat	900
gatctgggtc	ctcattttaat	aggtgaaaat	aaaaaatatgg	catatatgaa	catatccata	960
tatatacgtt	ccttattata	a				981

&lt;210&gt; 397

&lt;211&gt; 579

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 397

atggtattaa	aattagcact	aaaaaattat	aaaaattatt	tcgaagcaaa	aaatacaaaa	60
tttttttagtt	ggcaaaaaat	tttagagttc	agtttaacag	atcgatttaa	aattcttgat	120
atgatgtgtg	atcatgatgt	tgtatattat	tctcaagaca	aacgtagaaa	aacgtattta	180
aatgtagata	catcggggtc	atcaatggaa	tgtaatatat	tagagttttt	aattcattat	240
tttaataaat	accagtttaga	aataattaaa	gctactcaag	atacggattt	tgaattacat	300
ggtatgatgg	aacataagaa	tataaaagat	tatttcttct	catttatgtg	taatgatcct	360
aaagaatgta	ttattttatca	tacgaaccac	tttaaaaaag	aagcaaagga	agaaaacacg	420
tttcctgaag	aaccgaatcg	tgaaataagt	gcttataatt	tatacttaaa	ttattattat	480
ttcatgaaac	gttatagttc	atatggaata	aaaaaaacat	tatatgttca	tttattaaat	540
ttaactggac	ttttaagtaa	caataaaaaat	atttattag			579

&lt;210&gt; 398

&lt;211&gt; 2223

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 398

atgaaaagta	gtaccttaga	aaaaatgaaa	aaatctataa	acttttttagt	tcattgtgaac	60
tcattttttac	aattagattt	ttttcatcaa	cttaatgaac	cacctgtagg	attaccacgt	120
tcatatccat	tatcattaat	tcttgaacat	aaattttaaag	aatggatgaa	tagttcgcca	180
gctgggttttt	attttttcaaa	ttatcataat	ccttatataa	gaaaagaatt	acaccgtaaa	240
gtattgacgg	aaaaatttga	gccacctaaa	atgaataaat	ggaatgaggt	tttgaagtca	300
ttaatagaat	gtgcatatga	tatgtatttt	gaacaaagac	atgtcaaaaa	tttatataaa	360
aatcataata	tatatataat	taataataag	ataatgttaa	tgagagattc	agttgattta	420
tataaaaaaa	atttttaagga	tgtttatatt	tttgctgata	tattttaatt	aagaaaatat	480
ttaacagcta	caccccta	aaaaaaaaaca	tggttagata	tgtattattt	tatttatagg	540
aatactggaa	attctgtaaa	tttttataaa	tatgggtatta	tatatggatt	caaaataaat	600
aaagtatat	tgaaagaagt	tggttgatgaa	ttatattcaa	tatataattt	taatacagat	660



atatttttcag	atactttcttt	cttacaaaacg	gtatattttgc	tcttttagaaa	aattgaagat	720
agttacagga	cgcacagaag	aaacgaccat	ataggtgtga	ataacatttt	tttcatgaat	780
gttgcaata	attattccaa	attaaacaat	gaagaaagag	aaatggaaat	acacaattca	840
atggcatcaa	gatattatc	caaaactatg	tttgctgctt	ttcaaagtgt	attttcaact	900
atgtaagta	acgatgcaaa	taatcttgat	aaagtatatg	gaaaaagtag	taatatacag	960
gtagcaacaa	gtaccactgc	atttcttaca	tttgcttatg	tatataacgg	aagtataatg	1020
gatatgttaa	caaataagatt	attaccacca	tatgcaaaaa	aaccaataac	acaattaaaa	1080
tatggaaaaa	cattcgtttt	ttcaaattat	tttatgttag	cctcacaat	atatgaaatg	1140
ttaaattata	aaaattttaag	tcttttgtgt	gaataccaag	cagttgctag	tgccaattat	1200
tactctgcta	aaaaattagg	acaatttggt	ggcagaaaaat	atttccctct	tactacttat	1260
tatctatctc	tcagaattcg	tgcatcatat	gggtgggtgc	atggtacaga	aacaaaaata	1320
tgtaatagt	aaggtgttag	ctgttctcgt	aaaggacctt	cgcctggaaa	atttttcttt	1380
aattggaaat	ctgatgcacc	tatatattta	tatttttact	ttttctctaa	tttatatctt	1440
gattctgcaa	aatattttcc	tggaggattt	tctacttcat	taaaagaaca	aactgaacat	1500
gtttcacaga	agggttttta	gaagaaacca	atgggtcatg	aacttacaaa	aaatttaata	1560
ctggacgtta	ctaattggatt	tatgtatgct	ttttgttttt	attctattat	gccattatat	1620
gcatattttg	aaaatgtgaa	tttttatatt	ataagtaatt	tccgttttct	ggatagatat	1680
tataatgcat	ttataaaata	ctttataaat	tttttcaaaa	cgaaacttaa	aaagtatact	1740
actgatgtat	ttataaaata	cgaatacgat	gcatatacaa	gtatgaagaa	atatggttat	1800
cttaaatgaag	ttattggatc	tagactttcc	tccaagaata	gaatagtaaa	atatatttat	1860
gatagcaacg	atgatattat	gaataattta	agacgatatg	atatggaaaa	caggttttaga	1920
aataaaatgt	caacatatgt	ggatgaatat	gctttttttg	atgattgtgg	aaaaaatgaa	1980
gtgtttctaa	atgacagatg	tgattattgt	cctattgttg	aagatttatg	tgaaccagat	2040
acaaaagaat	atcaaccaca	tactagtaat	atccaaaagg	taacagataa	aaatactaca	2100
tatattaact	atgaaaaatt	acatgaagaa	tcatactcac	aagaaactca	atcagataat	2160
accgatgatg	aaaaggataa	cgattttacca	gatactgaat	tgatgattac	aagattacaa	2220
taa						2223

&lt;210&gt; 399

&lt;211&gt; 747

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 399

atgcaaaaaa	atgatacatt	atatgataat	tttgtaaaat	ataataaaaa	aatatacaag	60
aagaatttga	ataatggaaa	ggatgataaa	aaatattcca	gaaatatgtt	aaacaataag	120
tattctgaag	atttatttga	atcggttaat	atggtagaat	gggtgttatta	taaaaaatgat	180
atgattaagg	aacgtaatgt	catactcgaa	tcaaaactcg	tatggaaaaa	acctagttgg	240
atgactagat	ttaagaataa	attatataaa	atgattttta	aaaagaataa	attttggaaa	300
tttatatcag	gaatcataac	agttttggga	aatagtgcga	taatttggta	gattattatg	360
ctcataggat	atataattaa	atattttatg	tgtttttggg	catgtgcgta	ttcatgttta	420
tgttcatgta	tatgttcacg	ttcaagttaa	tgttcatgca	tatgttcacg	catatgttca	480
tgatatgtt	catgtatatg	tacatgtacg	tgtatatgtt	catgtttatg	ttcatgtata	540
tgttcatgtg	tatgttcacg	tgtatgttca	tctgcgtgta	catgtgcttg	tgtatatact	600
agtgttaattg	gttctacatt	aattgctgta	tctgcaggta	tccttgcagc	tatttatatta	660
tttaattatat	taacaattat	aatagtttgg	ttacttgtaa	catggttatg	gtctcataag	720
gatgagtatt	acaaaacaag	tgaataa				747

&lt;210&gt; 400

&lt;211&gt; 924

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 400

atgaatatat	attacattaa	tatgttagta	atgtccattt	tattgattgt	tttattttta	60
tcatataatg	taaataatca	taataaaaaa	tataatgtag	gctatatattca	aaataacaga	120
caaatgataa	tgatgaaatc	aagacgttta	gctgaaattc	aattgcctaa	gtgtccacac	180
tataacaatg	atccagagct	taaaaaaata	attgacaaat	tgaatgaaga	aagaattaaa	240
aaatatatag	agactaataa	ttcttttgaa	gaattacacg	gattattagt	gaaagaaaga	300
accaaattctt	tatatgagaa	tggtatgaag	aaatcctcga	atatggaaaa	ggaattattg	360
aaaaaatatg	atgattcaat	tcgtgatgaa	cataatgtta	tctcaaaatc	aggaattttac	420
acaagtgatt	atagaaaatt	atatgataaa	tcttgtgatt	atcaaaatca	aaagatattg	480
agagatgaat	tggcttcacg	ctgtaaggta	catgataatt	atttagataa	tttaaaaaag	540
ggttgctttg	gaggtgtagg	tatatgtaca	ttgtgctctc	ttcttgtgag	caatatttgg	600
attggatatg	ctgtgactgc	tgctaaagag	gtaattaccg	gtttgtattc	tttagatatt	660
gctaataaat	ttacgaaggc	gcttgctggg	atctattttc	tttttagttc	ttcaatcgag	720
aatgctgggtg	tttctgggtg	tactattttt	tattgggatt	ctatgagaat	ggctagtatt	780
~agagttcta	ctattaatcc	ttatgggatt	gcagctctgg	tattaattgt	attagttgtt	840

gtactttatag tattatatat atgggtgtat agaagacgaa aaaaatcatg gaaacatgaa 900  
tgcaagaaac atttaagcac ctaa 924

<210> 401  
<211> 330  
<212> DNA  
<213> Plasmodium falciparum

<400> 401  
atgaacttaa aaaaatacag taaaaacgaa gaatgtaaag aaaatatgga taattactta 60  
atgtatcttc gtatgcaaga tgatataaaa tatttagaaa gaaataatac atggaataat 120  
atttggttg ttacaatgac cttattttta atcattataa tgatagcatg tatattttct 180  
gttggtatta ctacgcac tcgattttat cctgcacttt ttcttgcatg ttttttaata 240  
tatatgtatg ctctgttttt tcttaaaatt aaaataactt ttaccgaatt aaaaaaaaaa 300  
ttgtacaaat tttttcaaaa aaaaaataa 330

<210> 402  
<211> 411  
<212> DNA  
<213> Plasmodium falciparum

<400> 402  
atggaaaatc agatgcaaga tcatatagat gattctatag acaaccctat ggatgattct 60  
atgaatgata aattggaaca taataattca ttagaagata gcataaaaga atactataca 120  
ttaacaaacc catcagttga tgaagaaaat aaatcatttt ttaaaaaact taaattaatt 180  
atgaatata tagatgacgt gcattctgat ttattagtaa ataataatgt tacagatgga 240  
agtatttttt ctctcgaact tgtacctata agtcttttat taaccaaggc attaacctgc 300  
ccacttatag gaactgtgac tctttcttat attactagca gaataaattt cttgaataaa 360  
tatgaaggag aaaatatata cacaaaacat gaatcaaaaa tatttaaatg a 411

<210> 403  
<211> 909  
<212> DNA  
<213> Plasmodium falciparum

<400> 403  
atgcaaagaa agcggtataa taatttttat ataaaagcag aaagggattt tcagaattct 60  
ttatataaat taaatgataa aaatgttaaa tcttgtgaat tcgaaaataa gatgaaatca 120  
tctgacaaat tatcttcac atagaagca gatgaaccaa ataaaatgca agaaccat 180  
ataatagaag aatcaaatat aatagaagaa cctaataaaa tagaagaaca aatatataa 240  
gaagaatcaa ataaaataga agaatacaat aaaatagaag aaccaaatat aatagaagaa 300  
tcaaatgaaa tagaagaatc aaataaaaata gaagaatcaa atataataga accaaatata 360  
atagaagaat caaatacaat agaagaatca aataaaatag aagaatcaa tataatagaa 420  
ccaaatataa tagaagaatc aaatacaata gaagaatcaa ataaaataga agaatacaat 480  
ataatagaag aatcaaatat aatagaagaa caaaaataaaa tagaaaaagt gaatcaaca 540  
aaatcaccat taaggaatca tcagatccaa ataaaataa ctattgataa aataattcaa 600  
aattccaatg gagatgaaaa acttcaaaga cttagaggtg catcctgggt aataaataat 660  
atggaatcat ctgaagaagt taaacagaga cttagagggc tagcacaatc atacatatat 720  
aaccagatg aatcaaaaaa aagaaaaata attaaagaaa tttataaata tagtaaaaaa 780  
gaagaaaata atgatattaa aaatatgttc ttaaaaatac ttaaatgtag agatttaagt 840  
aacacagagc ctcgagagta tcatctacct ttacaaggat tatctagacc ttgttatctt 900  
ttcgtataa 909

<210> 404  
<211> 306  
<212> DNA  
<213> Plasmodium falciparum

<400> 404  
aataatctta gtaatgatgt ttcaggaata tgtactgtta tgaaatatag ttttgcagat 60  
cttcgcgata taattaaagg aacagatttg tgggatcaaa acaatgatgc aaaacgatta 120  
caagaaaatt ttaaaaataa atatggtaaa attaaaggta cacttggtgc caaatatgcc 180  
cgtgatgac ccccatatac aaatttacgt caaaaactggg ggggaagcaat gaaatgtcgc 240  
ataccagaat tacgtgcagt accagataaa caaggttact tacgacataa attggaatgt 300  
tcctga 306

<210> 405  
 <211> 849  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 405  
 atgataatta ttgttccttt tatatTTTTT aatttaatat ttacctctga tatgatgtat 60  
 gaatatattg aaaataccaa agtacctatt tttgttaaatt ttttttttgg gaaaagtatt 120  
 tttattgaag atatatTTTt ttatgttggt atgattatga aagaaatgat ggaagggcaa 180  
 aatataagag aagaggaagt agctgaatta ttaaaagata gattagattt atatatagat 240  
 aatgaagatg aatgggagaa gttaattggaa aatgaaatta gcatgttatt aaagtcttca 300  
 ttttctaatt ttatattaga atctatagga tggacatatg agaatgtttc taatattttt 360  
 ttagaagaaa aagcaaattc tggataaaat aaaaaagata tatattttaa agaagctaatt 420  
 gagagaatga ttagaaattc aattgttttg agacaatgta aaagtcgttt tatatctata 480  
 ataacaaatt attatccttt taaagaacaa aataatcctt ttataaagca ggcacaatat 540  
 gtatcctcat ctaattatgt attggatgat ataataaata atatagacta tagtatagat 600  
 aatatacata gagccataga taatttatac tatgaacata tattaatttt attagaggaa 660  
 gaaaaaaatg aaatactaga agaaatatta aggaatattc taaaaattat tttgtgtgat 720  
 gttgaacaaa cggtagaag atcagcacia aaagtattac aaaatgcaga aggagatata 780  
 aatttgatgc ttaaaagagc taaaggatta caatcattgg gtaaaatgat attacagaag 840  
 gtttaattga 849

<210> 406  
 <211> 561  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 406  
 atgttagcac aaaaaaacac aaataaaaaa ccattcggaa ataccttaac gaatatattg 60  
 ttttaaggaca aaaaaaaaaa aaatcttgat cctcaaattt catctctagt tagtttagta 120  
 gataatatgg atataactca agaaaaaaaa gataaaatca aaaatctctc attaaaaat 180  
 ataaatagta gagatgtaaa agaaaaaaaa gaatcaatta atgaacttca aaaatatagt 240  
 aataacgaag aatgtaaaga atatatggat agttatttaa tgcattctcg tatgcaaaat 300  
 gatataaaat gtttaaaaag aaaaaatttg tggaaataata tttggattgt ttcaacgacc 360  
 ttattattaa tcattataat gatagcatgt ataattgtat gtacacctga aacatatact 420  
 gcattgtacc ctgcatttat tcttttaatt tttattatcc atatagttgc tegtattttt 480  
 cctgacatga aaataggttt taaaaaatta aaaacaaaat tgaacacatt ttttcaaaac 540  
 aaaaagcaaa taacaaaata a 561

<210> 407  
 <211> 693  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 407  
 atgaactact ttctgtcact ttttaatgta tccttatttt ttctcttaat atttaaatat 60  
 tcatacaaga atatagtaaa aaaagatcta caagataaat ttaacaaatc cataataaca 120  
 ataaatatag caagtcgaat actaacagaa aataataaaa aatgggtataa gaaatatatt 180  
 tatacatcaa ttttagtggt aaataaaaaa ccacaaaaaa gagaaagaaa aatgaagag 240  
 gaaaatcaaa aagacaatac aaaagtggat aatgataata atatggaaaa tgagatggaa 300  
 aatcatatag atgattctat agacgaccct atggatgatc ttatgaatga taaatgggaa 360  
 catcataatt cattggaaga tagaataaaa gaatactata cattaacaga cccatcagat 420  
 ggcaagaaa ataattcatt ttttaaaaaa cttaaatata ttatgaatat attagatgaa 480  
 gtgcattctg atttattaat aaataatagt gttacagatg gaagtatttt ttctcccgaa 540  
 cttgtacctt taagtgtttt atcaaccatg acattagcct gtccacctat aggaactgtc 600  
 actcttcctt atattactaa cagaataaat tttttgaata gatatgaagg acaaaatata 660  
 cacacagaac atgattttaa aatattttaa tga 693

<210> 408  
 <211> 774  
 <212> DNA  
 <213> Plasmodium falciparum

<400> 408  
 atgggttgaag aaccgtttga gaaaaaagac aaatctgggtg ttttattaaa agacaaaaat 60  
 aatgaagagg gaagaaaaaa agaaagacaa aagcctatga gtattaaatc aataataaaa 120

aaaaaaaaaa	aaaacaacaa	caataataat	aataataatg	tgttaaaaaa	tttaaataat	180
gaagaaataa	ataaacaacg	aaatatgacg	aatgaaagaa	tacgaaataa	aaataaaaaa	240
gataaaggag	ttgagaatat	ttcaagtaat	acacagatgg	aagaaaaaaa	tataatatgt	300
aaagatataa	attcgaatgt	aatattaaat	caaaacgaaa	taaatgacga	tcaaatgggt	360
caaaaaataa	aagaaaatft	tgtcaaggat	ttaatgaaaa	atgaaaacaa	agaaatatft	420
aaacagatag	aaacaattaa	ttcagttggg	actatggcaa	aaattaaaaa	ttcattatat	480
agcataatat	ttaaagggtc	taatttttgg	aagggtctag	gaatatattt	atgtacattg	540
tcaggtgctg	cactagggca	attgatttta	gcaggatatt	tgcaattcgg	aacattttct	600
gttatgaatt	tttcaattta	tttttcagct	gttccttcat	ttatagcatt	cagtagtttt	660
gtaggaataa	tattattaag	cattataatt	gttatttgct	ttcttggtg	gttggtggcca	720
tcaagaggga	aattgatggg	taaagataaa	acagaaaaata	aaagtgatac	ataa	774

&lt;210&gt; 409

&lt;211&gt; 924

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 409

gaactatata	catccatcta	tgatgatgac	ccagaaatga	aagaaataat	gcacgatttt	60
gatcgacaaa	catcacacg	ttttgaagaa	tacaatgaac	gtatgaacaa	aaacagacaa	120
aaatgtaaag	aacaatgtga	tagagatata	aaaaatatta	ttttaaaaga	taaaattgaa	180
aaagaattaa	aacaacagtt	agcaacattg	gaaactgata	tatctaccga	tgatatacca	240
acttgtgttt	gcaataaatc	agtagcggac	aaagtagaaa	aaacatgttt	gaaatgtgga	300
ggtgtgttgg	gtggtgcagt	tccagaattg	ggtttattat	gtggttatgg	tgcatatgag	360
ttggtaaaag	ttgctattgg	agctgctgaa	aaagcggcta	tagctgaagg	tgctaaagcc	420
ggtattgctg	aaggtattag	ggtagccatt	aaaggaataa	aagatgcatt	caatatagag	480
tttttagatg	gtaaaacatt	agcagaagtt	attactggaa	aaacgtttta	taattcaacg	540
ttttttgttg	aaaaatttgt	gcaagaatat	aacacagtgt	gtttgtcttc	tactacttac	600
caagatacac	tattttgcga	ttatggttca	atgttcggag	ggaagggttg	taatattaca	660
gctatatcat	taaacgcgaa	aaacactgca	ataaaggctg	gtcaagctgc	tgcgaaaatg	720
actactgaaa	ctactaaggc	gcttacagcg	gaaaaaactg	gcgaggtaac	aagtacatca	780
gctatttttt	ctaattccat	ggtaattagc	tttattgtag	tagtaattat	agttattata	840
cttttaatta	tttatttaat	tttacgatat	cgaagaaaaa	aaaaaatgaa	gagaaaactc	900
caatatataa	aattattaga	atag				924

&lt;210&gt; 410

&lt;211&gt; 951

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 410

atgaaaatgc	attactctga	aatattattt	ttttcacttt	cattaaatat	attgataaca	60
tcacatagtg	cgcatagtga	gaataaacia	tacattacac	catatacacc	aaatacttca	120
tcacgagtgt	taaccgaatg	tgacattaaa	atgtcaattt	atgataatga	tggggatatg	180
aaatctgtga	aggaaaatft	cgatcgacaa	acgtcagaac	gatttgaaga	atacgacgaa	240
cgtatgaaag	ataaacgccg	aaaatgtaaa	gaacaatgtg	acaaagatat	acaagaaatt	300
attgtaaaag	ataaaatgga	aaaatcatta	gcaaaaaaag	tggaaaaagg	ttgtcttagg	360
tgtgggtgtg	gttttaggag	tggtgcagca	agtgttgga	taattgggtc	aattgctgta	420
aatgaagtga	aaaaagctgc	tttggttgct	gcagctcaaa	aggggtattg	ggtaggcatt	480
gctaaagcca	ttgaagaatt	aggaaaaata	gtagggttaa	gtgatttttc	ttatttaaat	540
tggtctgcaa	tgattactgc	aacaacttat	tataaaccaa	tgaaacttgt	aaacatttgt	600
aactctgcaa	acagtatgtg	tactgattct	aatcctgctt	ttacgtcttt	attttgcaaa	660
gcctcatata	gaataaatcc	tgaagtttca	agttctagat	ttacagaagt	aatttctcaa	720
gaggctgcaa	aagctgcaag	tgacgcccgt	gaagctgcta	aaaatgctga	aaaagcccaa	780
atagccttgg	taaatgaaga	aagtgcacat	ttgtacagtg	caattgggtta	ctccgctatt	840
gccatattga	ttatattatt	ggttatggta	attattttatt	taattttacg	ttatcgtaga	900
aaaaaaaaaa	tgaataaaaa	actacaatac	acaaaattat	taaatcaata	a	951

&lt;210&gt; 411

&lt;211&gt; 1107

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 411

atgaaagtgc	attatatgaa	tatattattg	tttgcctctc	cattaaatat	attggaacat	60
aatgaaaggg	accataacaa	cactaccctt	catacatcaa	ttaccagatc	attatgcgaa	120
ttcgaattat	atgaacctgc	caattatgat	aatgaccaag	aaatgaaaga	agtaatgcaa	180

caatthtgagg	ttcgtacgtc	acaaagattt	cacgaatatg	atgaaagttt	gcaaagtaaa	240
cgaaagcaat	gcaaagatca	atgcgataaa	gaaatccaaa	aaattatatt	aaaagataaa	300
ttagaaaaac	atatggcaca	acagtttaagc	acattagaaa	caaggataac	caatgacgat	360
attccaacat	gtgtttgcga	aaagtcgatg	gcggataaaag	tggaaaaagg	atgcttgaga	420
tgtggatgta	tattaggtgc	ggccatgcct	gaattgggat	cggtaggtgg	gagtccttta	480
tatgctttaa	atacctggaa	acctgtggca	cttaaggccg	caattgccgc	agctaacaaa	540
gcagggtatg	cagcagggtat	taaagcgggt	gatgctgcag	gtatgaatgt	agttattgta	600
caattaggaa	aatggggtat	aaatgaattt	tgtcctgaaa	tatttgaatc	cattcttaaa	660
ataaaccatt	atagtaaaact	caaagatttt	gctagtgcga	ttgttgcaga	acatgataag	720
atctgtgcga	taacgacatc	tggtgaaaat	tctatgtgcc	taccatttga	tattgcatta	780
gggtctaagt	atgcaaaaagg	cacaccaatt	ggctcctccag	catctcaagc	tatacaaaaa	840
atgatgaacc	aacttgttgg	aaaagctaaa	ggtagtgcgt	atttcatggc	taataaagt	900
aattctgaaa	cttattctaa	aatcataact	aaacaggccg	atttgataga	agctggattt	960
aacagttgca	caacttctat	atatgcttct	attattgtaa	tattgattat	agttttaatt	1020
atggtaataa	tatatttgat	tttacgttat	cgacggaaaa	aaaaaatgaa	gaaaaaactc	1080
caatatataa	aattattaga	ggaataa				1107

&lt;210&gt; 412

&lt;211&gt; 1047

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 412

atgaaactgc	actacactaa	aatattatta	ttttctttc	cattaaatat	attgttaaca	60
tcatatcatg	cacataataa	aaataaacca	tacatcacat	cacgtcatag	acaaactagt	120
acatcacgag	tgtaagcga	atctgaccca	tatatgctca	attatgataa	tgatgatgat	180
atgaaatctg	tgaaggaaaa	tttcgatcga	caaacttcac	aacgttttga	agaatacgaa	240
ggacgtatga	aagataaaacg	ccgaaaatgt	aaagaacaat	gtgacaaaga	tatacaagaa	300
attattttta	aagataaaaat	ggaaaaatca	ttagcagaaa	aagtggaaat	agggtgtctt	360
agggtgtggg	gtggtctagg	aggtgttgca	gcaagtgttg	gaatatttgg	tacagttgct	420
gtaaaagagt	tggcaaaaac	ggctactgct	gcggcagttg	cagcagctca	ggaagcggtc	480
aaggatgcag	ccatggctgc	gaccattaaa	gctgtgggtg	ctgcggcagg	taagggaattt	540
gttattgcag	gattaaaaca	aatgggtgta	tcaactctag	atggtaagga	attgggaaca	600
tatattactg	caacaaatta	tactaatgtc	aaaaacattg	ctcacgctat	aaataactca	660
tatgagccat	cgtcatgtct	aataactgtc	ccagtcgatt	ccaaacctat	ttgcacttgg	720
gtgagggcaa	aggaggagc	tgcacgggta	attcaaggga	aacagttttc	aacgcaggaa	780
actataaaag	tagctgtaac	atctatcgct	tcagatgccg	aaaatgttgc	tgcagcagct	840
gaacaacaag	ctactaagga	tgctataaaa	gctagcactc	ttgcagtaga	ctctaaatat	900
gctatttgcc	agaatgctat	tattgcttct	gttgttgcct	tattaattat	agttttaatt	960
atgataatta	tttatttagt	tttacgttat	cgtagaaaaa	agaaaatgaa	gaaaaaagcc	1020
gaatacacaa	aattattaaa	tcaataa				1047

&lt;210&gt; 413

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 413

atgaacatgt	attacgttaa	aatgttattg	tttgcctttt	taataaatat	attagtatta	60
ccacattatg	agaattatct	aaataacat	tataatgtat	gtctcattca	aaacaagacc	120
aaaagaacaa	cgataaattc	aagattatta	gcacaaacga	aaaatcataa	tccacattat	180
cataatgatc	cagaactcaa	agaaataatt	gataaaatga	acgaagaagc	aattaaaaaa	240
tacaaaaaat	ctcatgatcc	atatgaacaa	ttgaaaagaag	tagtagaaaa	aaatggaaca	300
atatatacag	gtggaaaatg	tgacgaaccc	atgtcaacga	cagaaaaaga	tttattggaa	360
acataaaaag	aggtttttga	tgacgaaggt	gatattgtta	agtcaggcat	gagtcaaaat	420
gttgatgaaa	aatcttcaac	atgtgaatgt	actgatatta	atgggtgcga	attaacaaaa	480
acaaaaggaa	aagataaata	tttaaaacac	ttaaaaggga	gatgtaccgc	tggtatatgt	540
gtatgctccg	tcagtagtgt	attcttaaca	ttgataggtt	tgataactgc	aaaaaatgct	600
gccgttgctg	ctgtcacttc	tagctttaac	gaagcatcta	agatttgcgc	atcctctatt	660
tctgtattac	atatgtttac	tcattgaact	gtgactttat	ctatgccatc	agttactgca	720
gcaggaggtg	tagaatgttt	ttctgattta	gccggaacta	tttcaagtgc	tgctatgggt	780
gtatttgaac	cttgtgggtat	tgacgctttg	gtgctactta	tattagctgt	tgtgcttata	840
atattatata	tatggttata	tagaagaagg	aaaaattcat	acaaacatga	atgcaagaaa	900
catttatgta	agtaa					915

&lt;210&gt; 414

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 414

ataaatacag	ttttgtttta	aaatatgaaa	cgcaaaaaaa	aaaaaaaaaa	tatacatgta	60
tatacatata	tattgcattt	atatatacct	atatatccat	atatgcacaa	acctacttgt	120
atacatactt	acatatatac	caatacatat	atattaatat	ttatatatag	gaaaaaaccc	180
aattattacgt	ctggacgtac	aaatcttttt	cggtgtcattg	atataactca	aaacgcttat	240
gagatattta	caacgaaatc	accaaataagg	tatgtccccgt	atgaaaagtgg	ccgatataaa	300
tgcaaaacat	atattttacat	ggaaggagaa	gaaacggacg	attacagtta	tgttctgact	360
tatcttcttc	tgatattact	tcttcatcag	aaagttagta	tgaagagata	g	411

&lt;210&gt; 415

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 415

gatttggttac	ataaatgggtt	agatagacat	agagatatgt	gtgaacaatg	gaataacaag	60
gaggatattt	tgaacaaatt	gaatgaagaa	tggactatag	aacataatga	agatctgttg	120
gatataccat	catcaagtca	tgatgatatt	cttaaaaatta	aggatgaaac	atataaatatc	180
attagtacaa	acaattttata	tagttatgaa	aataatgata	taacccca	ccaactcgga	240
ttgccaata	tcatacctag	tggtattatt	aagcaccaaa	ataatggact	gcgcacaaat	300
atatctatgg	atataccttt	tgatgaacaa	aataataatt	tggaaaacag	caatataaca	360
tatgaagatg	atgaggtgca	aaattcgtag				390

&lt;210&gt; 416

&lt;211&gt; 993

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 416

atgaaagacc	attatatttaa	tatattattg	tttgctcttc	cattaaatat	attggtatat	60
aatcaaagga	actattacat	cacacgtaca	ccaaaagcaa	ccactaggac	attatgcgaa	120
tgtgaattat	atgcacctgc	cacctatgac	gacgatccac	aatgaaaga	agttatggat	180
aattttcaatc	gtcaaacaca	acagagattt	cacgagtacg	acgaaaggat	gaaaactaca	240
cgccaaaaat	gtaaagatca	attcgataaa	gaaatccaaa	aaatttatatt	aaaagataaa	300
ttggaaaaag	aattaatgga	caaattttgcc	acattacaaa	ctgatataca	aatgatgct	360
attcccacat	gtattttgcga	aaaatcctta	gcagataaaag	tggaaaaaac	atgcttgaga	420
tgtggaagtg	tgttcgtgtg	tggtattaca	cccggttggg	gtttgatcag	cggttttaggt	480
tatgtaggat	ggacaaatta	tattactgaa	atagctatac	aaaagggtat	tgaagcaggt	540
gttaaaagcag	ggattcaaga	attaaaaggt	tttgctggct	tatctcgatt	aattaatttt	600
tccgaaataa	aaaattttgat	taatcataca	aattatttta	aagaaatgac	atagtgttca	660
tttcttcaag	atgctaataa	aacacactgc	tctgctcgtc	ctacaagtaa	ggaaatattt	720
tgcaattttg	tatcacataa	tggggaaaagt	gcattatcca	agcgagctgc	cggtattgca	780
gattatgctg	cagatatggc	taaaattact	gaagaagggtg	tattggaaga	gggagccagt	840
gcaactagta	gtttaactac	tgcaataatt	gcttcaatta	ttgcaattgt	agtaataatt	900
ttaattatga	taattatttta	tttagtttta	cgttatctac	gaaaaaaaaa	aatgaagaaa	960
aaactcgaat	atataaaact	actaaaaggaa	tag			993

&lt;210&gt; 417

&lt;211&gt; 1038

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 417

atgaaactgc	acttccctaa	aatattatta	tttttctttc	catcaaatat	attgttaaca	60
tcataatcatg	tgcatagtaa	aaataaacca	tacatcacac	cacgtcatac	accaactatt	120
acatcacgag	tgtaagaga	atgtgacata	cataagtcaa	tttatgataa	tgatgaagat	180
atgaaatctg	tgaaggaaaa	tttcgatcga	caaatatcac	aacgttttga	agaatacgaa	240
gaacgtatga	aaggtaaacy	ccaaaaacgt	aaagaggaac	gtgacaaaaa	tatacaagaa	300
attattgaaa	aagatagaat	ggacaaatca	ttagcagaaa	aagtagaaaa	atgttgtctt	360
atatgtgggt	gtgggttagg	aggtgttgca	gcaagtgttg	gaatatttgg	tggaaattgct	420
ataagttagt	tgaaaaaagc	tgctatgatt	gccgctattg	catccgccca	aaagaccggt	480
gttctagccg	gtgaagctgc	acgtattccg	gcaggtatta	aggctgttat	tgcaggatta	540
aaacgaatgg	gtatatcaac	tctaggtggt	aaggatttgg	gaagctattt	tgctacaaca	600
atttatacta	atttcaaaac	cattgctcgt	gttataaata	gtgaatatca	aacagattca	660

tgtctgatag	gtggccctgc	cactgacaag	tctaaaacca	tttgcaattg	ggtgagggca	720
aattttgttg	ctccacagga	tagtccaggg	aaggggtggt	cagtgtacaa	gtctatagaa	780
acagctgtaa	aatctatcgt	cacagatgcc	gaaactgttg	ctcaaagagc	tgtagaaaac	840
gctactgaag	aagttataaa	aaatagcact	gctgcagcag	aatctacata	tgctggttgc	900
cagactgcta	ttattgcttc	tggtgttgca	ataataatta	tagcttttagt	tatgataatt	960
atatatttag	ttttacgtta	tcgtagaaaa	aagaaaatga	agaaaaaagc	cgaatacaca	1020
aaattattaa	atcaataa					1038

&lt;210&gt; 418

&lt;211&gt; 1296

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 418

atgatgtcga	tttcggcttt	tcctttaagt	gtaggaattg	cgtttgctgc	gttgagttac	60
tttttactta	agaaaaaatc	caaattttct	gttgacttgt	tgctgtact	gaatatcccg	120
aaaggagatt	atgaaatgcc	tacgttaaaa	tccaaaaata	ggtacatacc	atatagaagt	180
ggccaataca	aaggcaaaac	atacttatat	gttgaaggag	atacagacga	agagaaatat	240
atgtttatgt	ctgatactac	tgatataacc	tcttccgaaa	gtgaatatga	agaaatggat	300
atcaatgata	tatatgttcc	tggtagtcca	aaatacaaaa	cgttgataga	agttgttctg	360
gagccatcaa	aaagtaatgg	taacacacta	ggtgatatgg	taggtaccac	tatatttaca	420
gatgaggaat	ggaatcaatt	gaaagatgat	tttatatcac	aatatttacc	aaatacagaa	480
ccaaataata	attatagaag	tggaaaatagt	ccaacaaata	ccaataatac	taccacgtca	540
catgataata	tgggagaaaa	accttttatt	atgtccattc	atgatagaaa	tttatatact	600
ggagaagaaa	ttagttataa	tattaatatg	agtactaaca	ctaataatga	tattccaaaa	660
tatgtatcaa	ataatgtata	ttctgggtatc	gatttaatta	atgacacatt	aagtggtaac	720
aaacatatgt	atatatatga	tgaagtgcta	aaaagaaaaag	aaaatgaatt	atgttggaca	780
aatcatgtga	aacaaacgag	tatacatagt	gttgcaaaaa	atacatatag	tgacgacgct	840
ataacaaata	aaataaattt	gttccataaaa	tgggttagata	gacatagaga	tatgtgtgaa	900
aagtgggaaa	atcatcatga	acgttttagct	aaattaaaaag	aaaaatggga	aaatgataat	960
gatggaggta	atgtacctag	tgataatcat	gtgttgaata	cgatgtttc	gatcgaaata	1020
gatatggata	atcctaaacc	tataaatcaa	tttagtaata	tggatataaa	cgtggataca	1080
cctactatgg	ataatatgga	agatgatata	tattatgatg	taaatgataa	tgatgatgat	1140
aatgatcaac	catctgtgta	tgatatacct	atggatcata	ataaagtaga	tgtagatgta	1200
cctaagaaag	tacatatgga	aatgaaaatc	cttaataata	catctaattg	atcgttggaa	1260
caacaatttc	ctatatcgga	tgtatggaat	ataataa			1296

&lt;210&gt; 419

&lt;211&gt; 984

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum

&lt;400&gt; 419

atgaaagtcc	attatatata	tatattattg	tttgcctctc	cattaaatat	attgatatat	60
aatcaaaagga	accataaaaag	caccacacat	catacattaa	aaataccaat	cactagatta	120
ttatgcgaat	gcgaattata	tgacacctag	aactatgata	gtgatcccgga	aatgaaaagg	180
gtaatgcaac	aattttgtgga	tcgtacaaca	caacgatttc	acgaatatga	caaccgtatg	240
aaagataaac	gccaaaaatg	taaagataaa	tgcgataagg	aaatccaaaa	aattatttta	300
aaagataaat	tggaaaaaga	attaatggac	aaatttgcca	cattacaaac	tgatatacaa	360
aatgatgcta	ttcccacatg	tgtttgcgaa	aagtcgtag	cagataaagt	ggaaaaagtt	420
tgtttcagat	gtggagggtt	attgggaggt	ggtattgccc	ccggttgggg	tttgggtcagc	480
ggtttaggtt	atgtaggatg	gacaaattat	gttacacaaa	cggctctgca	aaagggtatt	540
gaggctgtca	tttcatattt	agaacaaata	cctgggtataa	agggattacc	tggttttaac	600
ttggcaaata	ttgttaatcc	aaacaattat	tcacaggtg	gcttgcttac	tacagctata	660
gatgcggcag	ctagaccaat	atgttctggt	aatcatagta	aaactcctgc	atttttagt	720
tatgcaaccc	aaaatggggg	aagtataatt	gccaaaggtat	cagttgatgc	agaaaatgct	780
gccaaacgctg	gtatagatgc	agcctctgct	gaagctgcta	atgtggcacc	aaaaactcct	840
acgttaacaa	atactataat	tgtctccttt	gttgctatag	tagttatagt	tttgggttatg	900
ttgataatat	attttatttt	acattatcga	agaaaaaaga	aaatgaagaa	aaaactccaa	960
tatataaaat	tgttaaaaga	atag				984

&lt;210&gt; 420

&lt;211&gt; 6594

&lt;212&gt; DNA

&lt;213&gt; Plasmodium falciparum



atggggagtg	gtaagggcgg	tgatccgcag	gatgaaagtg	tcaaacatat	gtttgatagg	60
ataggagaag	atgtgtacga	gcaagtga	agtgaactg	taaattatgt	tagtgaattg	120
gaaggaaagt	tgtcactagc	accaattttg	ggtgtggaat	caggtagcac	caatgaaaca	180
tgcaaccttg	tacaggatta	ttataataag	cctgtttatg	gtaacagtaa	caggtatccg	240
tgcaaaaaat	taaaagggaat	tacaaatgaa	gaacgttttt	cggatacact	tggtggccag	300
tgtactaaca	aaaaataaaa	aggtaatgaa	tatagtacta	aaagtggtaa	agattgtgga	360
gcactgtgcac	cataccgcag	tctacattta	tgtagtcata	atttgggaatc	tatagacaca	420
acgtcgatga	cgcataagtt	gttggttagag	gtgtgtatgg	cagcaaaaata	cgaaggaaac	480
tcaatagata	cacattatcc	acaacatcaa	cgaactaatg	aggattctcc	ttctcaaata	540
tgtactatgt	tggcacgaag	ttttgcagat	ataggtgata	ttgtaagagg	aaaagattta	600
ttttatggta	atagcaaaaga	aaaagaaaaa	agagatgaat	tagaaaacca	tttgaaacca	660
attttcggga	aaatacatga	aaaattgaa	gataagggaag	gagcagaaac	tcgttacgga	720
agtgtacta	caaattattta	tcaattacga	gaagactggt	ggtatgcgaa	tcgcccaca	780
gtgtgggaag	ctatcacgtg	cgacgttcat	ggttctgact	attttcgaca	aacatgtggt	840
gataaagaaa	ccactgcaac	tcgggttaaa	gacaaatgcc	gctgtaagga	cgaaaacggc	900
aaaaagcccg	gctcaaatgc	cgaccaagtc	cccacatatt	ttgactacgt	gccgcagtat	960
cttcgctggt	tcgaggaatg	ggcagaagac	ttttgtagga	aaaaaaaaaa	gaaattagaa	1020
aaagtggaa	aacagtgtcg	cgattacaaa	caaaatttat	attgtagtgg	taatggctac	1080
gattgcacaa	aaactatata	caaaaaaggt	aaacttgtaa	taggtgaaca	ttgtacaaac	1140
tgttctgttt	gggtcgtct	gtatgaatct	tggtatagata	acaaaaaact	agaatttcta	1200
aaacaaaaac	aaaaatacga	aacagaaata	tcaaatagcg	gtagtgtgtg	tggtgagtggt	1260
ggtgttaagg	gtaggaatag	gaaaaaacgg	ggtgcaggtg	tagaaactgc	tactaattat	1320
gatgggtatg	aaaaaaaaatt	ttataaagaa	ctgaaagaaa	gtgagtatgg	aaaagtcgat	1380
gatttttttaa	aattattaaa	taatgaagat	gtatgcaaaa	aaattaaagga	tgaaaaagaa	1440
aaaattgatt	ttaccaaac	tgctgataaa	aatagtaata	atgaaggaa	attttatcat	1500
tcggaatatt	gtaaaacgtg	tcccgcactgt	ggggtcaaac	gtaaagataa	tcaatggaaa	1560
gataaatatg	atggcaagtg	cacacgtgga	aaactttatg	agcctgcaag	tggtgcacaa	1620
ggtactccta	ttaaaatcct	taaaagtgg	gaaaaacaaa	aagaaattga	aacaaaatta	1680
aaagcgtttt	gcgatcaaac	aaatgggtgat	acaacaaata	gtgttgctag	aggcgggtggc	1740
gctgatggta	gtggtagtaa	gagtaatagt	aaggaaactgt	atgaagaatg	gaaatggtat	1800
aacgaggtac	agaaagttaa	agatgataaa	aatggagagg	aagaggatga	agacaggaa	1860
gatgtagaca	aggtaaaaaa	agcaggcgga	ttatgtatat	tggaacaa	aaaacatgaa	1920
agtagaaata	attcttcaaa	tgaacctgag	caattccaaa	agacattcca	tgattttttt	1980
tacttttggga	taggacgttt	tttgaacgat	tctatgtatt	ggagaggaaa	agttaacagt	2040
tgtataaata	atcctaagcg	aaagaaatgt	agaaatgaat	gtaaggatga	ttgtggttgt	2100
tttaagaat	ggattggaaa	aaagaaagaa	gaatgggaaa	atataaaaaa	acatttttaa	2160
acgcaagaag	cttttaagaa	taaaacgagaa	aatagcggaa	ttgacatgtt	cagcggacta	2220
atggattctg	ctgatgttgt	tcttgaattg	gctttggaat	tagaacaact	tttccaagat	2280
attaaagatg	gttatgggga	tgtaaaggaa	ttaaaaggaa	ttaaagaact	gttggtatgag	2340
gaaaaaaaaa	aaaaacaagc	agaagaagca	gttgtgtgtg	ttgttgccga	caatcaaaag	2400
aagaccacaa	ttgataaatt	actacaacat	gaaggagacg	atgccataaa	ctgcctaaaa	2460
acacacaaaag	aaaaatgcga	agaaacgcaa	ccaaaaccac	ccggcgctgg	aggtcctggt	2520
gccccctccg	aaaccggaga	aaccactaca	cttgaggacg	aagaagaaga	agaagcgaa	2580
gaagaagacg	caggcgacga	agtcgaggag	ggggagacgg	tggaaccac	agaaggggat	2640
gagacagaga	cggtggagca	gccggtgaag	gacacggaca	gggaggggga	ggaggaagag	2700
gcaaagaagg	caacagatac	gactacatca	ctagacgttt	gcgacacagt	gaaaaacgca	2760
ctcacaacaa	acgacaatct	cactgatgca	tgtaaaactaa	aatacgggtcc	aggtggaaag	2820
gaaagattcc	ccaattggaa	atgtgtatca	agtggtgaaa	aaagtgttgc	cactgccggt	2880
agtagtggtg	ccactggcaa	aagtgggtgat	aagggtgccca	tttgtgtgccc	accaggagg	2940
cgacgactat	acgtgggtgg	gttaaccaag	ttgacaagtg	ctggcacgtc	tagtgagtca	3000
ccacaggggg	gtagttagtc	atcacgggag	agtgtgtgt	cacaaggtaa	cggtggcgac	3060
gacatcacca	ccaccgagtc	attacgttaag	tggttttatag	agacggcagc	tatagagact	3120
tttttcttat	ggcatagata	taaaaaagag	tggtgggacac	aaaagaaggc	ggaactacaa	3180
cgaaatggat	tactactcgg	cacaggtgct	agcctcaacc	ttggtggtga	tgactccaac	3240
cccaaacac	aattacaaaa	aagtgggtacc	ataccctctg	atttcttgag	attaatgttt	3300
tatacttttag	gtgatttatag	agatattttg	gtaccagggtg	ttgctgacga	caaaaacggg	3360
ggcaacaaca	taataacttaa	tgcgagtgg	aacaaggatg	aaaaacagaa	aatggagaaa	3420
atacaagaga	aaatagaaca	aattcttcca	actagtggta	acaaagaaac	tcgtggcccc	3480
caaaatagtg	tcaatgaccg	tcaatccttg	tggtatagaa	tcgccgaaca	tggttggtcat	3540
ggaatgggtt	gcgcattaac	atataaagat	gacgacaatg	gcctcaaagg	cgctcgtaaa	3600
aaaccacaaa	agattgaaaa	tccggagaaa	ctttggaacg	aaacaaccaa	aaaacccaaa	3660
gacgagaaat	accaatacca	aactgccaaa	ctcgaaagatg	aaagtggcga	aaaacgacca	3720
gactcctcag	ccagtgggtac	gaaatttaacc	gacttcatca	aacgcccccc	ttatttccgt	3780
taccttgaag	aatggggtga	aaatttttgt	aaaaaacgaa	cagagatgtt	ggggaagata	3840
aaggaggatt	gctacaaaaa	tggtggacgt	tgtagtggtg	atggtttgaa	atgtaacgaa	3900
atagtttatag	ataaggaaaa	aattttttggc	gattttacttt	gtccgacgtg	tgccagacat	3960
tgtagattttt	ataaaaagtg	gataaacaca	aaaagggacg	aatttaataa	acaatcaaat	4020
gcataattctg	aacaaaaaaa	aaaatacgaa	gaggaaaaatg	atagtgtctca	aaagaataat	4080
ggagttttgcg	gaacactaaa	agatgacgt	gcagaattttt	taaatagggtt	aaaaaacgga	4140
atgtaaaaa	atgagagtga	agagaataaa	aaagcagagg	atgaaataga	ttttaagaaa	4200



ccagatgata	catttaaaga	tgcagataat	tgtaaaccat	gttctgaatt	taaaattaaa	4260
tgtgaaaatc	ataattgcag	cagtgggtgg	aatacacacaag	ggaagtgcga	tggaaaaacg	4320
actattgctg	caacagaaat	tgaaaatata	aaaacaaata	ctaaagaagt	tactatgctt	4380
gtgagtgatg	acagtaaaaag	tgcaacggaa	tttaaggatg	gtttaagcga	atgtaaagat	4440
aaaggatat	ttaaagggtat	tagaaaagat	gaatgggaat	gtggcacaagt	atgtggtgta	4500
gatatatgta	atctgaaaaa	aaaagataac	attgggaaag	aaagcgataa	aaaatatatc	4560
ataatgaaag	aattgcttaa	acgatgggta	gaatattttt	tagaagatta	taataaaatt	4620
aaacataaaa	tttcacattg	tacgaaaaat	ggtaaaaggat	ccaaatgtat	aaaagggtgc	4680
gtagataaat	gggtacaaca	gaaaaaggaa	gaatggaaac	aaataaaaaga	acgtttcaat	4740
gaacaatata	aaagtataaac	ctcagatgaa	tattttaacg	ttaaaagt	tttgagacc	4800
tggataacct	aaattgctgt	tgtaaatgat	caagataatg	ttataaaatt	aagttaagttc	4860
ggtaattctt	gtggatgtag	tgccagtgcg	atctcaacaa	atggtaatga	ggaggatgct	4920
atagattgta	tgattaaaaa	gcttgaaaaa	aaaattgacg	aatgcaaaag	gaaacctggc	4980
gaaaatagtg	gtcaaacatg	taacgaaaca	ctaacacatc	cccttgacgt	tcaggatgaa	5040
gatgaacccc	ttgaagaaac	agaagaaaac	ccagtgggaa	aacaacaccc	atcattttgt	5100
ccgccagtgg	aagataaaaa	aaaagaggaa	gaaggagaaa	cttgtaacac	ggcatcacca	5160
gcaccagcac	cagcaccagc	accagcatct	ccatccccga	caccggcccc	tgccgatgaa	5220
ccgtttgacc	caactatact	acaaacaacc	attccttttag	gtattgagct	ggcattagga	5280
tccattgctt	ttttattttt	gaaggtaata	tatatatgtg	tggtatatat	gtatatatat	5340
atgtgtttct	gtatatatat	gtataaaaaa	actaaacacc	ctgtcgacct	tttcagtggt	5400
attaatatcc	ccaaaagtga	ttatgatata	ccgacaaaac	tttcacccaa	tagatatata	5460
ccttatacta	gtggtaaaata	cagaggcaaa	cggtaacatt	accttgaagg	agatagtggg	5520
actgatagtg	gttacaccga	tcattatagt	gatattactt	catcttccga	aagttagtat	5580
gaagaaatgg	atattaatga	tatatatgta	cctggtagtc	ctaaatataa	aacattgata	5640
gaagtagtac	ttgaaccctag	tggttaacaac	acaacagcta	gtgatacaca	aatgatata	5700
caaaatgatg	gtatacctag	caataaaatt	agtgataatg	aatggaatac	attgaaagat	5760
gattttatat	ctaataatggt	acaaaatcaa	ccaaaggatg	taccaaataa	ttataaaagt	5820
ggagatatct	cattcaatac	acaaccgaat	acttttatatt	ttgataaaacc	tgaagaaaaa	5880
ccttttatta	cttctattca	tgatagaaat	ttacttaacg	gagaagaata	tagttataat	5940
gttaatatga	gtactaatag	tatggatgat	ccaaaatatg	tatcaaataa	tgtatatctt	6000
ggtatagatt	taattaatga	ttcactaagt	ggtaacaaac	atattgatat	atatgatgaa	6060
gttttgaaac	gaaaagaaaa	tgaattattt	ggaacaaatc	atgtgaaaca	tacgagtata	6120
catagtgttg	caaaaaatac	aaacagtgat	cctatactca	atcaaataaa	tttgttccat	6180
acatgggttag	atagacatag	agatatgtgc	gaaaagtggg	aaaatcatca	cgaacgatta	6240
gccaaattga	aagaagagtg	ggaaaatgag	acacatagtg	gtaacactca	ccctagtgtat	6300
agtaacaaaa	cgttaaatac	tgatgtttct	atacaaatat	atatggataa	ccctaaacct	6360
ataaatcaat	ttactaatat	ggatactatc	ttggaggatc	tggaacaaacc	atttaatgaa	6420
ccctactatt	atgatatgta	tgacgatgat	atttattatg	atgtaaatga	tcattgatata	6480
tcaactgtgg	ataactaatgc	tatggatgta	cctagtaaag	tacaaattga	aatggatgta	6540
aataccaaat	tggtgaaaga	gaaatatcct	atagcagatg	tatgggatat	ataa	6594

**THIS PAGE BLANK (USPTO)**

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
11 May 2000 (11.05.2000)

PCT

(10) International Publication Number  
**WO 00/25728 A3**

(51) International Patent Classification<sup>7</sup>: C07H 21/04,  
C12N 1/21, 15/70, 1/16, 15/09, 15/30, C12P 21/06, 19/34,  
A61K 39/00, 39/015

(74) Agent: MCDONNEL, Thomas, E.; Office of Naval Re-  
search, 800 North Quincy Street, Arlington, VA 22217-  
5660 (US).

(21) International Application Number: PCT/US99/26796

(22) International Filing Date:  
5 November 1999 (05.11.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/107,131 5 November 1998 (05.11.1998) US

(71) Applicants and

(72) Inventors (for US only): HOFFMAN, Stephen [US/US];  
Naval Medical Research Center Annex, 12300 Washington  
Avenue, Rockville, MD 20852 (US). CARUCCI, Daniel  
[US/US]; Naval Medical Research Center Annex, 12300  
Washington Avenue, Rockville, MD 20852 (US). GARD-  
NER, Malcolm [US/US]; The Institute for Genomic Re-  
search, 9712 Medical Center Drive, Rockville, MD 20850  
(US). VENTER, J., Craig [US/US]; The Institute for Ge-  
nomic Research, 9712 Medical Center Drive, Rockville,  
MD 20850 (US).

(81) Designated States (national): AE, AL, AM, AT, AU, AZ,  
BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK,  
DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,  
LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO,  
RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,  
US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,  
KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent  
(AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent  
(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,  
MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

(88) Date of publication of the international search report:  
22 February 2001

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: CHROMOSOME 2 SEQUENCE OF THE HUMAN MALARIA PARASITE *PLASMODIUM FALCIPARUM* AND PRO-  
TEINS OF SAID CHROMOSOME USEFUL IN ANTI-MALARIAL VACCINES AND DIAGNOSTIC REAGENTS

(57) Abstract: Chromosome 2 of *Plasmodium falciparum* was sequenced and shown to contain 945,000 base pairs and encode 209  
predicted genes. Compared to the *Saccharomyces cerevisiae* genome, chromosome 2 has a lower gene density, introns are more  
frequent, and proteins are markedly enriched in non-globular domains. A new family of surface proteins, rifins, was identified.  
Rifins are believed to play a role in antigenic variation. The genome sequence provides a foundation for development of methods to  
control malaria, a disease that kills millions of people annually.

WO 00/25728 A3

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/26796

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : Please See Extra Sheet.

US CL : Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 536/23.7; 435/252.3, 252.33, 320.1, 69.3, 69.1, 255.11, 240.1, 240.2, 325, 91.2; 424/185.1, 265.1, 268.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
NONEElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Extra Sheet.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,733,772 A ( WILLIAMSON et al ) 31 March 1998, see entire document.	2-4 and 9
X	WO 94/17187 (THE UNITED STATES OF AMERICA, THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES) 04 August 1994, see entire document.	2-4 and 9
X	WILLIAMSON, K.C. et al. Cloning and expression of the gene for Plasmodium falciparum transmission-blocking target antigen, Pfs230. Molecular and Biochemical Parasitology. 1993, Vol. 58, pages 355-358, see entire document.	2-4 and 9



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*A* document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means	
*P* document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

10 JULY 2000

Date of mailing of the international search report

15 AUG 2000

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

PADMA BASKAR

Telephone No. (703) 308-0196

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/26796

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:  
1-5, 7 and 9
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US99/26796

## A. CLASSIFICATION OF SUBJECT MATTER:

IPC (7):

C07H 21/04; C12N 1/21, 15/70, 1/16, 15/09, 15/30; C12P 21/06, 19/34; A61K 39/00, 39/015

## A. CLASSIFICATION OF SUBJECT MATTER:

US CL :

536/23.7; 435/252.3, 252.33, 320.1, 69.3, 69.1, 255.11, 240.1, 240.2, 325, 91.2; 424/185.1, 265.1, 268.1

## B. FIELDS SEARCHED

Electronic data bases consulted (Name of data base and where practicable terms used):

Sequence search performed by A Geneseq, Swissprot, Issued patents AA, SPTREMBL and PIR.  
STN, MEDLINE, CAPLUS, WEST  
search terms: Hoffman, Carucci, Plasmodium falciparum, chromosomes#

## BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

The inventions listed as Groups I-XIII do not relate to a single inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

- Group I, claim(s) 1, 5, 7 and 9, drawn to a nucleotides encoding the proteins of chromosome 2 of Plasmodium falciparum, and a vaccine comprising nucleotide sequence
- Group II, claim(s) 2-4, drawn to proteins encoded by chromosome and rifins.
- Group III, claim(s) 6, 8, 10, drawn to a vaccine comprising secreted or membrane proteins of Falciparum .
- Group IV, claim(s) 11, 13 and 15, drawn to a method of detecting infection with Plasmodium falciparum by PCR or hybridization comprising nucleotide sequences.
- Group V, 12, 14 and 16, drawn to a method of detecting infection with Plasmodium falciparum by ELISA comprising polyclonal or monoclonal antisera.
- Group VI, claim(s) 17 , drawn to a polyclonal antisera.
- Group VII, claim(s) 18 , drawn to a Monoclonal antibodies.
- Group VIII, claim(s) 19, drawn to the use of proteins or fragments of proteins encoded by chromosome 2 of Plasmodium for the identification drugs to treat or prevent Plasmodium falciparum infection.
- Group IX, claim(s) 20, drawn to a method of use of rifins for the identification drugs to treat or prevent Plasmodium falciparum infection.
- Group X, claim(s) 21 , drawn to a method of use of secreted or membrane proteins for the identification drugs to treat or prevent Plasmodium falciparum infection.
- Group XI, claim(s) 22 , drawn to a method of use proteins or fragments of proteins encoded by chromosome 2 of Plasmodium for the identification or diagnosis of drug resistance in Plasmodium falciparum
- Group XII, claim(s) 23 , drawn to a method of use of rifins or fragments of Plasmodium for the identification or diagnosis of drug resistance in Plasmodium falciparum
- Group XIII, claim(s) 24 , drawn to a method of use of secreted or membrane proteins or fragments of Plasmodium for the identification or diagnosis of drug resistance in Plasmodium falciparum

The inventions listed as Groups I-XIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Group I is directed to a nucleotide and vaccine( method of use) which is the first product and first method of using the product. The special technical feature is the nucleotide encoding the proteins of chromosome 2. Groups II, III, VI, VII are drawn to structurally different products, which do not require each other for their practice and do not share the same or a corresponding technical feature. The Groups IV, V, VIII-XIII inventions are drawn to methods having different goals, method steps and starting materials, which do not require each other for their practice and do not share the same or a corresponding technical

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US99/26796

feature. Note that PCT Rule 13 does not provide for multiple products or methods within a single application. Since the special technical feature of the Group I invention is not present in the Groups II-XIII claims, and the special technical features of the Group II-XIII inventions are not present in the Group I claims, unity of invention is lacking.

## ELECTION OF SPECIES:

EACH group of invention (groups 1-13) has several patentably distinct and different inventions ( Multiple SEQ.ID.NOS ). If applicant elects group 1 then he is required to elect any one of the SEQ.ID.NOS listed in the application (should be identified with SEQ.ID.NO). In each group each SEQ.ID.NO is considered as a separate invention. For example if group 1 or 2 has 20 SEQ.ID.NOS then each group has 20 inventions and total inventions in the application are  $13 \times 20 = 260$  inventions.

**THIS PAGE BLANK (USPTO)**